CLEAN STREAMS
HEALTHY NEIGHBORHOODS

Raw Sewage Overflow Long Term Control Plan Public Hearing

Indianapolis Department of Public Works

August 3, 2006

City of Indianapolis
Bart Peterson, Mayor

DPW

INDIANAPOLIS
CLEAN STREAM TEAM

Agenda

- Welcome & Introductions
- Agenda Review & Ground Rules
- Presentation on City's Plan to Reduce Raw Sewage Overflows
- Questions (10-15 minutes)
- Public Hearing (time limited)
- Adjourn

Clean Streams-Healthy Neighborhoods Program

- **Raw Sewage Overflow Long-Term Control Plan**
- Septic Tank Elimination Program: converting 18,000 homes to sewers by 2025
- Sanitary Sewer Master Plan: addressing current and future needs in sanitary sewer system (eliminating constructed overflows and preventing sewer backups)
- Stormwater Master Plan: addressing neighborhood drainage problems and flood protection needs

Background on Sewer Overflows

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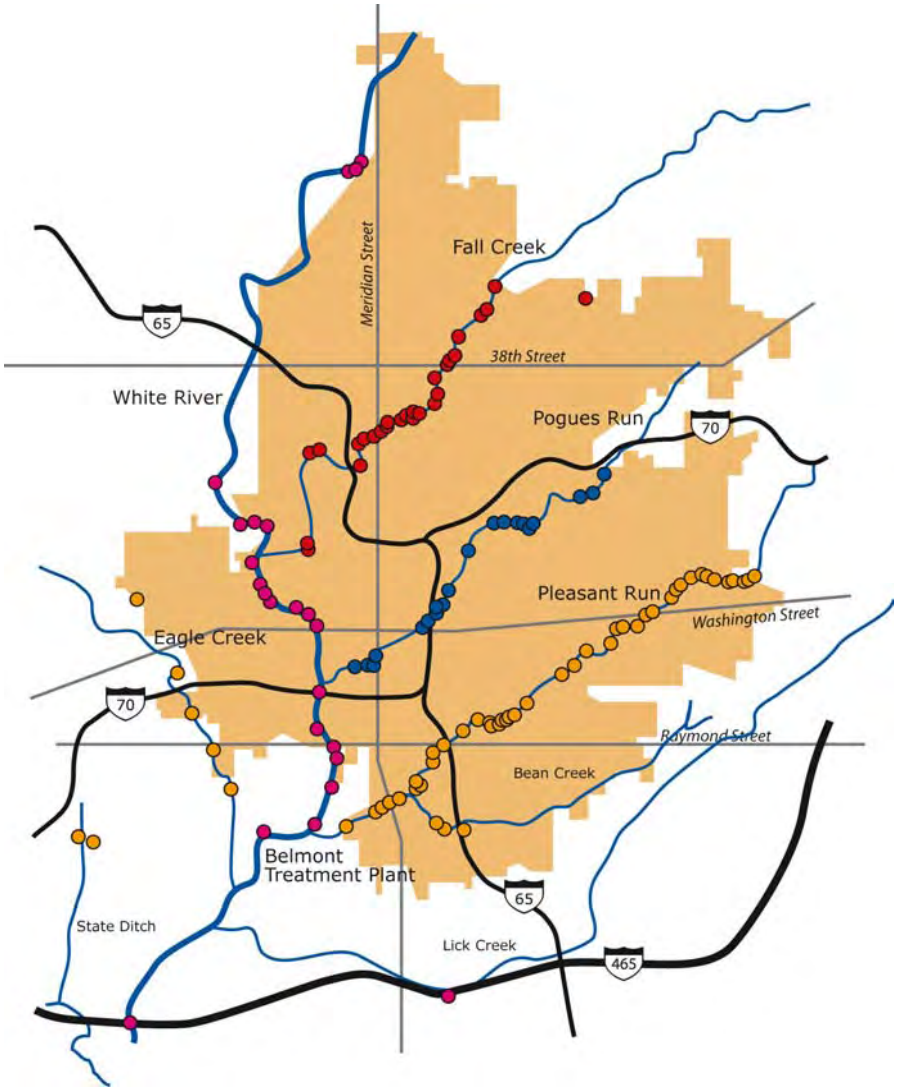
CLEAN STREAM TEAM

Where Overflows Occur

- In years past, nearly 6 billion gallons overflowed into our streams, on average
- 45-80 times a year, overflows sent bacteria, pathogens and untreated waste into:
  - White River
  - Fall Creek
  - Pogues Run
  - Pleasant Run/Bean Creek
  - Eagle Creek
  - Lick Creek & State Ditch



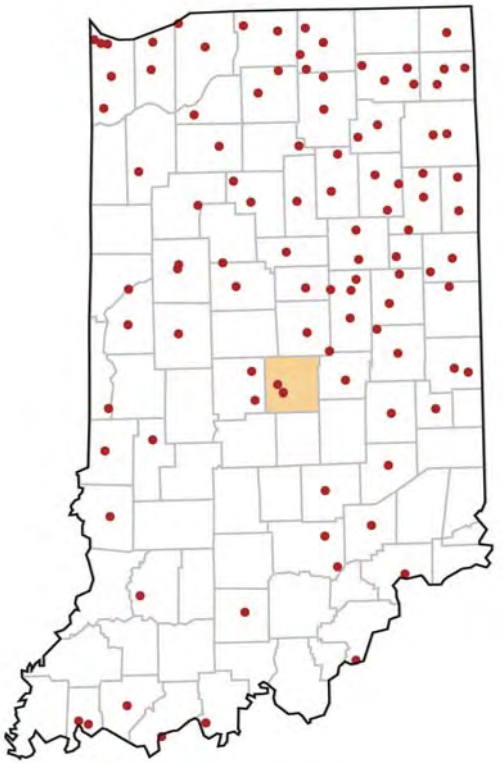
Projects Already Underway

- More than $200 million already invested in sewer system early action projects, reducing overflows by 145 million gallons/year
- Proposed $1.8 billion long-term plan will reduce overflows even more.

We Are Not Alone

A nationwide problem:

- 772 communities in U.S.
- 105 communities in Indiana



Plan Overview

Who's Been Involved?

- Department of Public Works
- Indianapolis Clean Stream Team
- Clean Stream Team Advisory Committee
  - Wet Weather Technical Advisory Committee
  - Mayor's Raw Sewage Overflow Advisory Committee
- Public meetings:
  - 2000: Public education and input sessions on overflow problem
  - 2001: Public comment on first long-term plan
  - 2002: Survey & public meetings on stream uses
  - 2004: Meetings in each watershed to collect input into plan alternatives
  - Speakers are always available to attend community meetings

Long-Term Control Plan Goals

- Dramatically improve water quality by reducing sewer overflows in a cost-effective manner,
- Improve neighborhood quality of life,
- Improve our streams to support fish and other aquatic wildlife, and
- Come into compliance with state and federal Clean Water Act permit requirements.

Long-Term Plan Overview

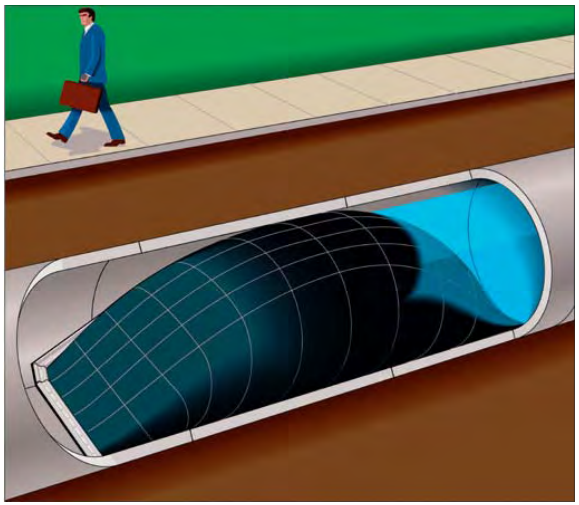
- **Deep Tunnel:** Underground tunnel along Fall Creek and White River to Belmont Advanced Wastewater Treatment Plant
- **Central Treatment:** Expanded capacity at two advanced wastewater treatment plants and new sewer connecting plants

Tunnel construction

Belmont AWTP

Plan Overview (continued)

- **Inflatable dams and pinch valves:** Better utilize existing sewer system.



- **New, larger sewers:** Eagle Creek, Pleasant Run & Bean Creek. Parts of White River, Fall Creek & Pogues Run.

Plan Overview (continued)

- **Storage tanks:** Pogues Run near Spades Park, White River at Riviera Club, and White River at IUPUI (already completed).

- **Sewer separation projects :** On State Ditch, Lick Creek, White River, and upstream ends of Fall Creek, Pogues Run and Bean Creek.

Plan Overview (continued)

- City is also required to invest:
  - $50.4 million by 2015 to eliminate chronic overflows from seven locations in the separate, sanitary sewer system
  - $3.5 million by 2010 on supplemental environmental projects to eliminate septic systems in the Epler-Meridian and Banta-Southport neighborhoods.

Map of Long-Term Control Plan

Cost of construction and operations over 20 years: $1.8 billion in 2005 dollars

Project Schedule

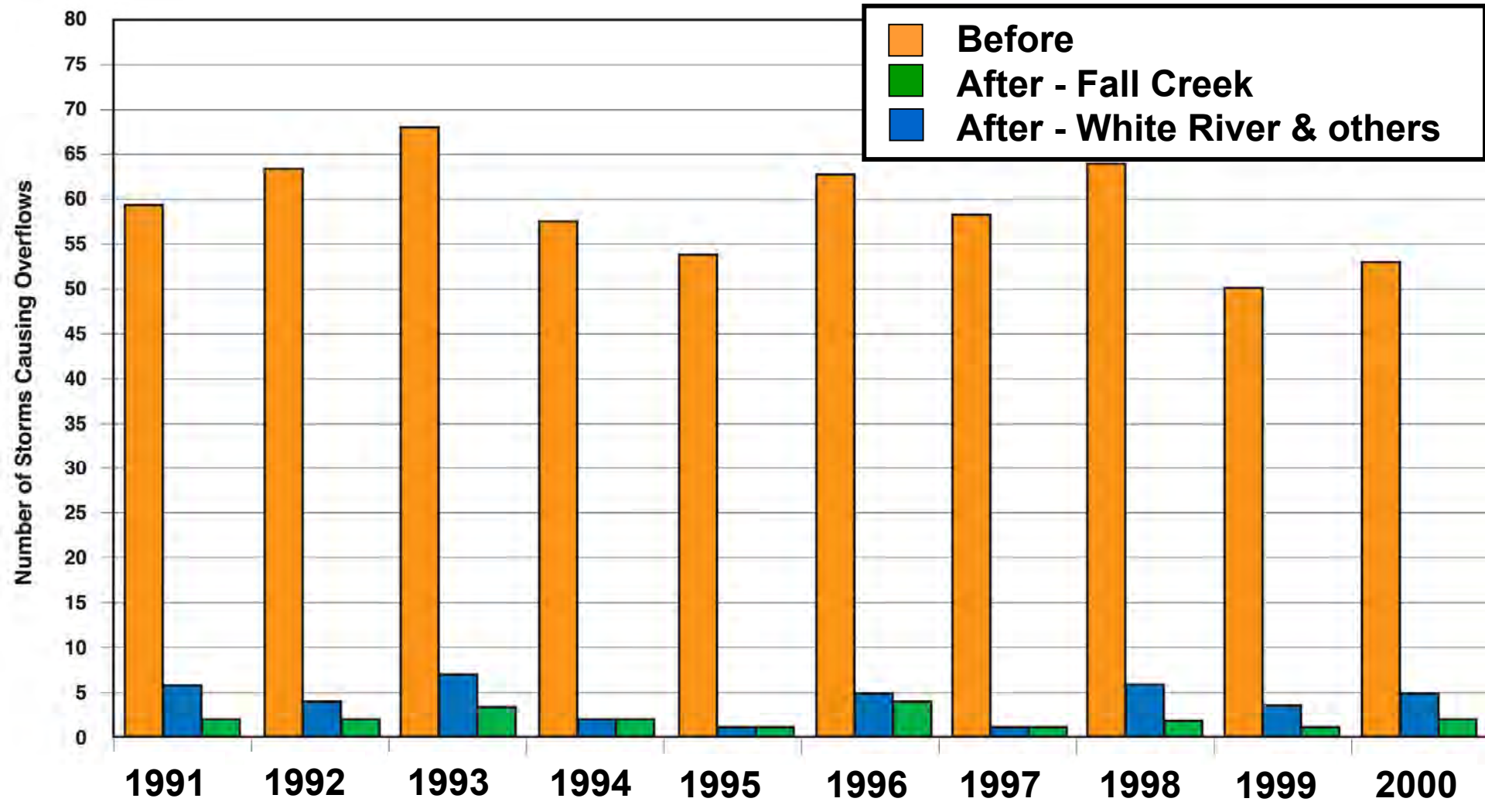
- Implemented in four, five-year phases.
- All projects complete by December 31, 2025.
- At least 20 years are needed to:
  - minimize disturbance to neighborhoods and coordinate with other capital projects
  - accurately evaluate the effectiveness of each project
  - secure rights of way
  - coordinate technical, manpower and material needs
  - manage the financial burden on ratepayers
- By 2025, average residential bill expected to increase to $55-60/month for 5,400 gallons (based on 2005 dollars)

Plan Benefits

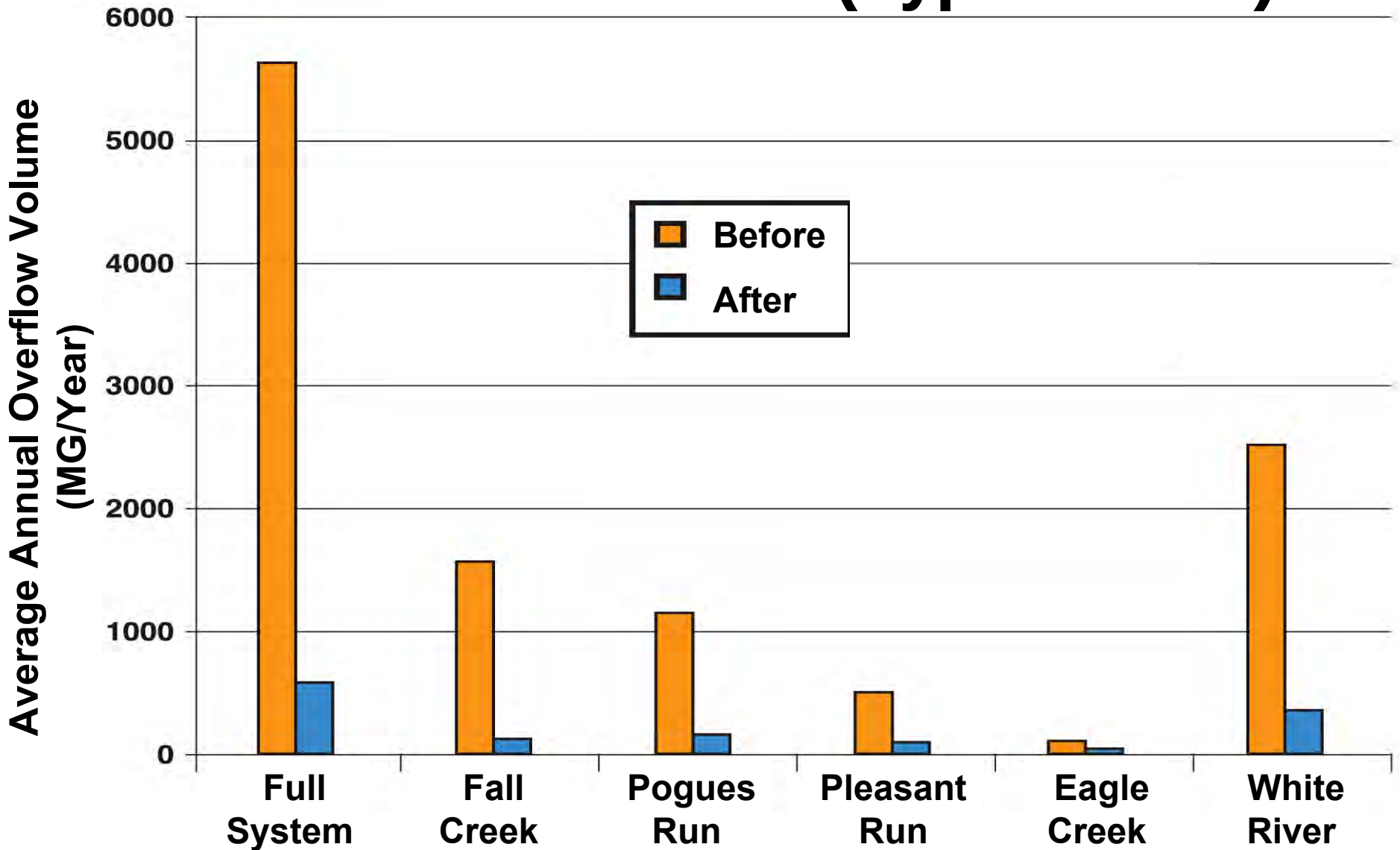
Overflow Reduction

- 97 percent capture of wet-weather sewer flows on Fall Creek; 95 percent capture on White River & other waterways
- In a year with “typical” rainfall:
  - 97% capture equals 2 storms per year causing overflows on Fall Creek (>1.99 inches of rain in 24-hour period)
  - 95% capture equals 4 storms per year causing overflows on other waterways (>1.57 inches of rain in 24 hours)
- Actual overflow frequency will depend on weather conditions each year
  - Range of 0-6 per year on Fall Creek and 0-10 on other waterways
- Comparable to what other communities are required to do

Predicted Overflow Frequency (1991-2000 data)



CSO Overflow Volume (Typical Year)



Compliance Monitoring Plan

- Continued monitoring to track the performance of new facilities and in-stream pollution
- Analysis of monitoring data to see if the plan is achieving the desired results
- Continued input from citizens, businesses and community groups about the status of the project
- Milestone reports to EPA, IDEM and the public

Long-Term Benefits

- Sewage overflow volume and overflow frequency reduced dramatically
- Streams protected when people are most likely to use them
- Currently known, chronic sanitary sewer overflows eliminated
- Urban streams enhanced and restored
- Jobs created
- Economic development encouraged along waterways

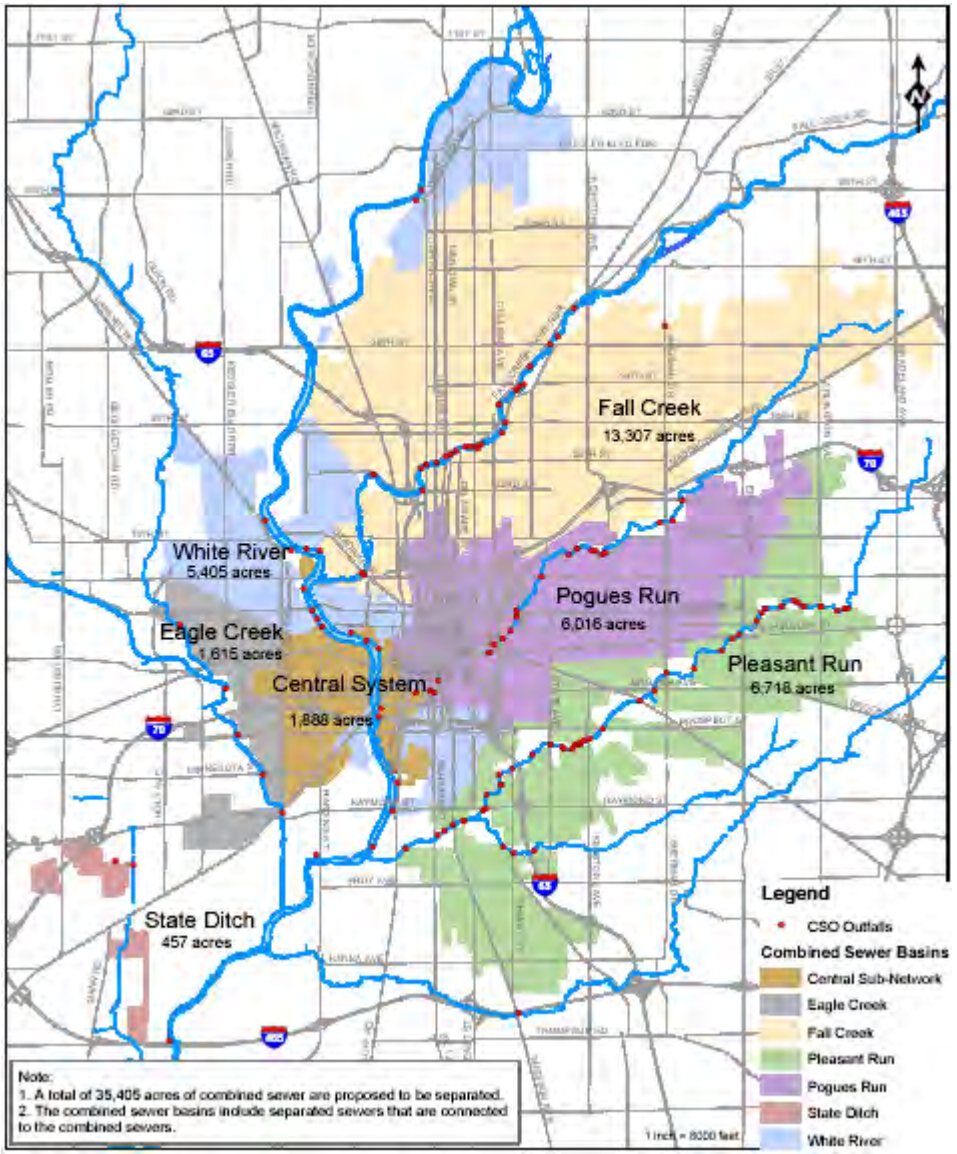
Public Comments

Questions We've Heard So Far

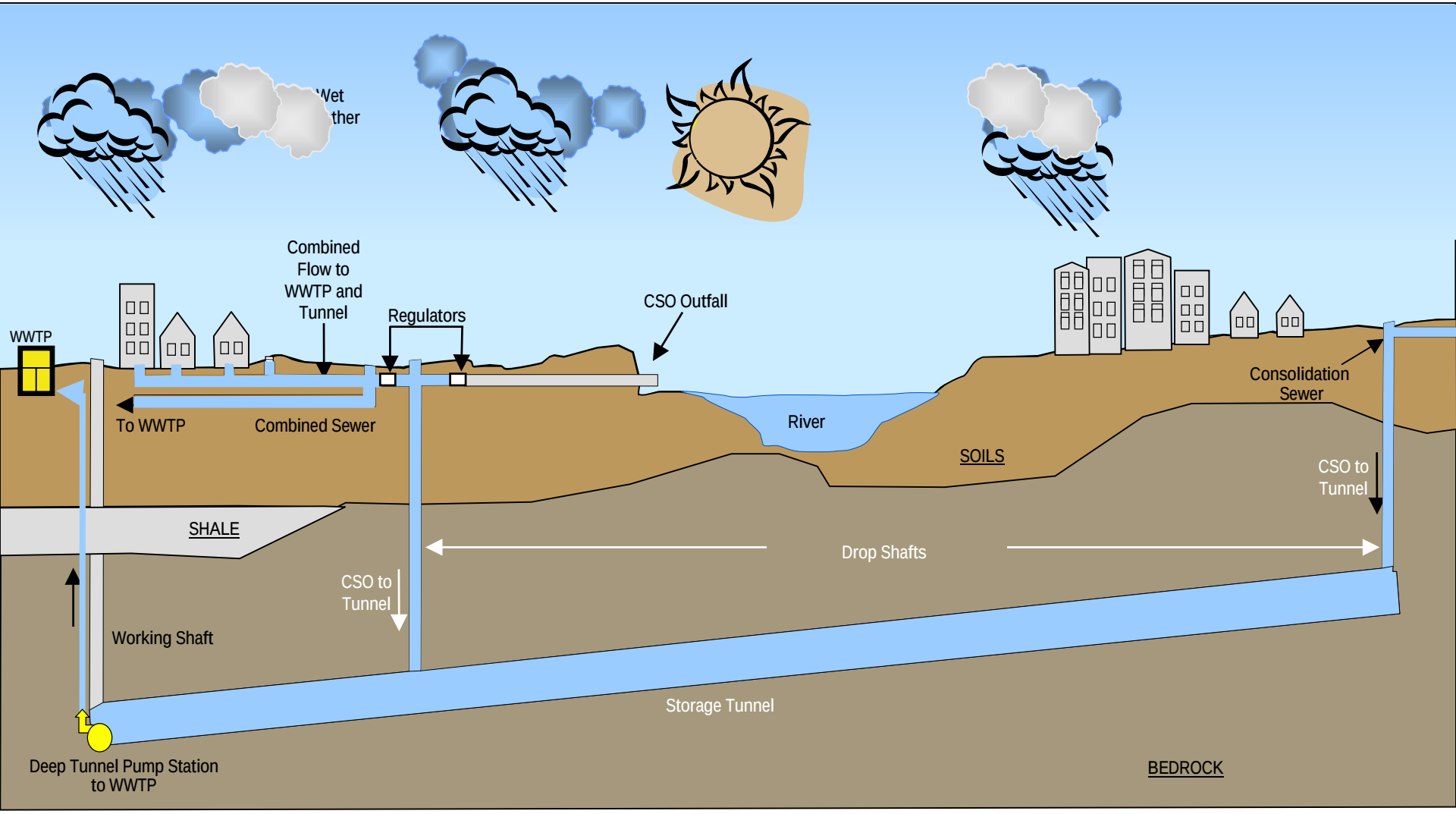
- Why not separate the sewers?
- How will the tunnel work? Won't it contaminate the groundwater?
- I can't afford the projected rates. What about state and federal funding?

Sewer Separation

- 35,405 acres in combined sewer system
- City reviewed complete and partial separation
- Cost to fully separate: $6.2 billion
- Fewer days meeting recreational standards
- More pollution from urban stormwater
- Widespread disruption
- Risk of not meeting future regulatory requirements to treat stormwater

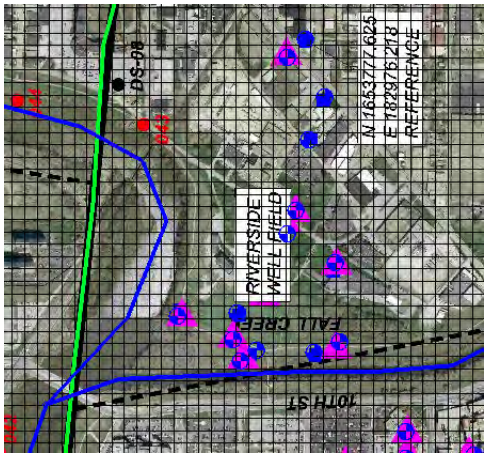


How a Sewage Tunnel Works

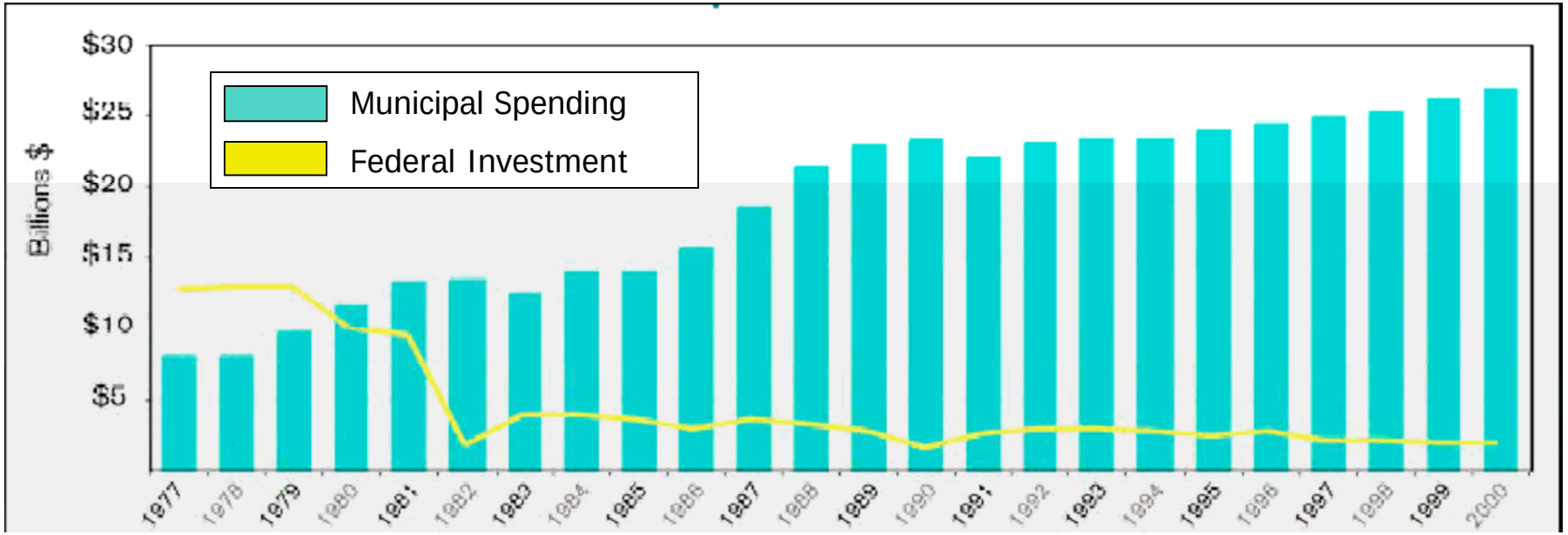


Groundwater Modeling & Monitoring

- Tunnel will be designed and built with groundwater protection methods that prevent contamination
- Model and monitoring will be used to understand the tunnel's impacts on the groundwater/water supply
- "Living Model" will be updated and evaluated:
  - During facility planning and design
  - During construction
  - Post construction
  - Long-term operations & maintenance



Costs & Funding Sources



- The cost of repairing, rehabilitating, and maintaining clean water infrastructure has risen dramatically in the United States while federal funding has been slashed
- EPA, GAO, and WIN report a $300-$500 billion gap between what is being spent and what needs to be spent on our nation's aging clean water infrastructure

Clean Water Trust Fund Needed

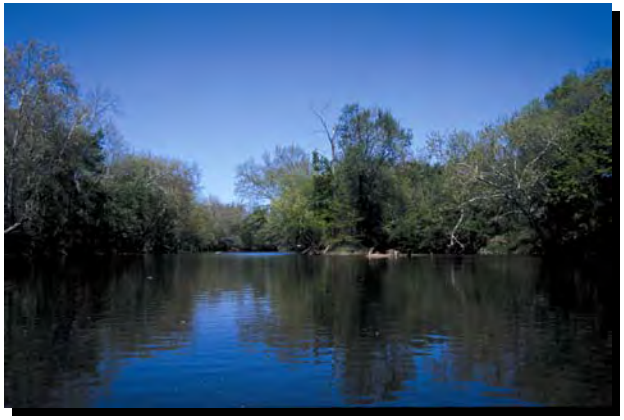
- For information, visit www.cleanwateramerica.org
  - A non-profit advocacy network
  - Working for a federal-state-local financial partnership and creation of a Clean Water Trust Fund that can only be used for clean water priorities
  - Over 140 organizations and 60,000 individual supporters
  - Sign on today to show your support to Congress

Additional Questions?

How to Comment on Plan

- Full plan is available:
  - At www.indycleanstreams.org
  - At all Indianapolis-Marion County Public Libraries
  - At DPW/CST offices (604 N. Sherman & 151 N. Delaware, 9th Floor)
  - On CD-Rom by calling 327-8720
- Written comments accepted until August 18:
  - On-line at Web site above
  - In writing to Indianapolis Clean Stream Team, 151 N. Delaware, Suite 900, Indianapolis, 46204
  - Fax to 317-327-8699

Next Steps



- Review & respond to public comments & finalize plan
- Submit plan to EPA and IDEM for approval
- Continue moving forward with project planning, design and construction, as scheduled
- Report progress to EPA, IDEM, advisory committee and public

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HEALTHY NEIGHBORHOODS

# of Speakers: (7)

SPEAKER SCHEDULE
Raw Sewage Overflow
Long Term Control Plan
Public Hearing
Aug. 3, 2006

✓ Sandhya Markand	Greater Indpls. Chamber of Commerce
✓ Rae Schnapp	Hoosier Environmental Council
✓ TIM ALTOM / CHAD LERDA	IRVINGTON RESIDENT
✓ John Trypus	Environmental Engineer
✓ IRENE DABney	Indpls Black Chamber
✓ Mike Logan	
Timothy Aden	

CLEAN STREAMS
HEALTHY NEIGHBORHOODS

ATTENDANCE

Raw Sewage Overflow
Long Term Control Plan
Public Hearing
Aug. 3, 2006

# of attendees: (27)

Name (Please Print)	Mailing Address (with Zip Code)	Phone Number/E-mail
Sandhya Markand	111 Monument Circle Suite 1950 Indpls. 46204	464-2243 Smarkand@indylink.com
JAY THORNE	7245 KNOLL DR. INDY 46217	jthorne@dle.com
JOHN CRIST	9 SOUTH SHAMROCK RD. HARTFORD CITY 47348	765-348-1020 JCRISTEES.W.COM
Rae Schnapp	Hoosier Enviro. Council 1915 W. 18th St. Indpls 46202	rschnapp@hecweb.org
John Tsagos	8470 Castle Creek Pkwy, Indianapolis, IN 46250	317-985-2823 tsagosj@aol.com
Mark Jacob	151N. Delaware-Indpls 46204	327-8707 MCJACOB@IndyGov.org
Roger Kelso	151 N Delaware 46704	rkelso@indygov.org
Pam Thevenow	3938 N. Rural 46205	221-2266 Pthevena@hhcorp.org
MARK NYE	CST	574-514-8189
BOB MASBAUM	DPW	327-2319

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Name (Please Print)	Mailing Address (with Zip Code)	Phone Number/E-mail
Tim Blagsvedt	Parsons Brinckerhoff 300 N Meridian Su. 990 Indy 46204 St	317 287-3404 blagsvedt@Pbworld.com
Dave Klunzinger	225 E. North St #2400 Indianapolis IN 46204	
Timothy Aden	2255 Broadway St 46205	Indyhousing1@Yahoo.com
Chris Roach	6057 N Broadway Indy 46220	CJRoach@iupui.edu
Carey Hamilton	5765 Ravine Rd Indpls 46220	careyhamilton@yahoo.com
Mike Massonne	CST	mmassonne@indygov.org
David Hudson	2700 S. Belmont Ave	317 639/7141
Chad M. Cerda	519 N. Lesley Ave 46219	cmcerda@hotmail.com
Tim Altom	321 N. Lesley Av. 46219	354-1383
Tom Brown	United Water, 2700 S. Belmont Ave 46221	639-7000

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Name (Please Print)	Mailing Address (with Zip Code)	Phone Number/E-mail
Otha Lawrence Jr.	2340 Highland Pl. Indpls In. 46208	(317) 442-9085
Turae Dabney	3921 N Meridian St, Ste 230 46260	(317) 924-9940

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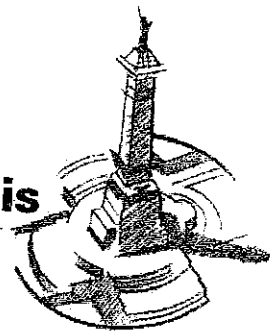
Name (Please Print)	Mailing Address (with Zip Code)	Phone Number/E-mail
TOM WOODY	1427 E EDWARDS AV #1 INDPLS, IN 46227	788-0612
Jean Ballard	261 W. 25th St. Indianapolis, IN 46208	rev_ballard@sbcglobal.net 925-3737
Renee Washington	2450 Boulvard Place, IN 46208	496-1661
[illegible]	1914 S. Gladstone Indpls 46203	431-5751
Bill Ahner	3930 Redfern Dr Indpls 46237	780-1011

LONG TERM CONTROL PLAN
PUBLIC HEARING

City of
Indianapolis
Bart Peterson, Mayor



QUESTION/COMMENT FORM

TODAY'S DATE: _____

THIS FORM IS PROVIDED FOR YOUR CONVENIENCE TO COMMENT ON THE PROJECT OR PRESENTATION. COMMENTS MAY BE SUBMITTED TODAY, OR MAILED **BY AUGUST 18.**

Indianapolis Clean Stream Team
151 N. Delaware Street, Suite 900, Indianapolis, Indiana 46204
FAX (317) 327-8699

NAME: (PLEASE PRINT)_____

ADDRESS: _____

_____

PHONE: _____

E-MAIL: _____

City of Indianapolis
DPW
Department of Public Works

INDIANAPOLIS
CLEAN STREAM TEAM

151 N. Delaware St.
Suite 900
Indianapolis, IN 46204

Tel. (317) 327-8720
Fax (317) 327-8699

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PLACE
STAMP
HERE

Indianapolis Clean Stream Team
151 N. Delaware Street, Suite 900
Indianapolis, Indiana 46204

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CITY OF INDIANAPOLIS
DEPARTMENT OF PUBLIC WORKS

- - -

PUBLIC HEARING REGARDING

COMBINED SEWER OVERFLOW

LONG-TERM CONTROL PLAN

- - - ORIGINAL

PROCEEDINGS

in the above-captioned matter, before Hearing Officer Jodi Perras, taken before me, Lindy L. Meyer, Jr., a Notary Public in and for the State of Indiana, County of Shelby, at the University of Indianapolis, Good Hall, Room 105, 1400 East Hanna Avenue, Indianapolis, Indiana, on Thursday, August 3, 2006 at 7:04 o'clock p.m.

- - -

William F. Daniels, RPR/CP CM d/b/a
ACCURATE REPORTING OF INDIANA
12922 Brighton Avenue
Carmel, Indiana 46032
(317) 848-0088

APPEARANCES:

ON BEHALF OF THE DEPARTMENT OF PUBLIC WORKS:
Jodi Perras, Hearing Officer
Kumar Menon
Carlton Ray
Imelda Oglesby

SPEAKERS PRESENT:

Tom Woody
Tim Altom
Timothy Aden
Chad Cerda
Mike Logan
Rae Schnapp
Sandhya Markand
John Trypus
Turae Dabney

- - -

7:04 o'clock p.m.
August 3, 2006

- - -

THE HEARING OFFICER: Good evening, everyone. Can you hear me in?

AUDIENCE MEMBER: Yes.

THE HEARING OFFICER: Hi. My name is Jodi Perras. I'm with the Indianapolis Clean Stream Team, and welcome to our public hearing on our proposed long-term plan to control sewer overflows.

I'm going to turn it over here in a second to the Director of the Department of Public Works, but before I do that, if you're hoping or planning to speak tonight at the public hearing portion of the meeting, please sign in at the table out in the hallway, because I'm going to be calling people off that sign-in sheet. If you're just here to listen, that's great. If you want to ask questions, that's a little more informal, but if you want to speak during the public hearing portion, please sign up so we have your name on the record.

I'm going to turn it over to Kumar Menon, who's the Director of the Department of Public Works, newly confirmed this year.

And Kumar, why don't you come on up?

MR. MENON: Thank you, Jodi.

Thank you all for coming out on a beautiful night. It's just a perfect night to be out here.

On July 18th, Mayor Peterson announced that we had reached a tentative agreement with EPA on the long-term control plan. Now, our plan is -- this plan is going to be one of the largest investments in clean water infrastructure in the city's history. We're very proud of this plan. I think it's a good plan. We've had some great people working on it for a long time.

This wasn't designed, you know, in a one-year time span, or even five years. I think it's been going on much longer than that, so a lot of good people have been working on this plan. We really believe that this is one of the best plans that the city can do, one of

the most affordable, and one of the most well-thought-out plans that we have.

After the public comment period that's today, we will be finalizing the plan and sending this information back to the U.S. District Court to be file there, and then we will start implementing the plan once it's approved and signed off on. So, this is just the beginning of a few steps before we start implementing the plan, so this input from you is going to be critical in making sure that we get through this process quickly and as fairly as possible.

The Mayor had committed to having public input through this process, and we have had public input for about what, all through the entire process. We had neighborhood groups, we've had neighborhood leaders participating in the process, so this has been an inclusive process, and this is one of those steps, again, to finish up that public input process.

Several people have helped in making

this plan happen. There are some of them that I want to recognize today, and first, with the City of Indianapolis, is Tim Method, our environmental coordinator for the city; and Margie Smith Simmons, who, if you haven't seen her by now, you will in wintertime, because she'll be out there with the snow trucks; Joe Watson.

And then from the Clean Stream Team, we've had several people who have helped us with this process as well. Jodi Perras, of course. She's seen this process through, I think, three different phases: With IDEM, with the city, and now with the Clean Stream Team, so Jodi's input has been critical.

And Mark Jacob, Rosemary Spalding -- are they here? I think -- yes, I see you there, Mark. Thank you -- Roger Kelso, Chris Ranck -- thank you again, guys -- Mark Nye and Mark Massonne, and Jay Thorne. Where's Jay? I saw him there, too.

So, thank you all for making this one of the best plans the City of Indianapolis

could have designed. We've had a lot of input from the engineering community, from the environmental community, from the environmental community in making this happen, so we look forward to getting your input today and moving on with this plan as soon as we can.

Thank you again.

THE HEARING OFFICER: Okay. Thank you, Kumar.

A couple of other people I should mention that have been involved as well are members of our Clean Stream Team Advisory Committee. It's a broad-based group that's been advising us, and we have with us Leon Bates here in the front row, and Pam Thevenow in the back row. I guess they're covering both corners of the room tonight. I don't see anybody else yet, but there may be some more coming later.

I'm going to go over the agenda for the meeting real briefly here, and kind of the ground rules for proceeding tonight. I'm going to give a -- try to be brief with a

presentation on the city's plan, and there have been documents out in the public for a couple of weeks now, so hopefully a lot of you have had a chance to review those and you may have come here tonight with some questions about it.

I'm going to give a presentation, trying to talk about what the plan will do and anticipate some of the questions or talk about some of the questions we've had, and we'll have a brief period of time for questions. What I want to make sure is that there's enough time for people who have signed up at the public hearing to speak, and if we don't have a lot, then, you know, we'll have more time for questions after that public hearing.

So, we're going to try to manage our time so we can all be home at a decent hour tonight, but I want to make sure everybody has a chance to say their piece as well. And then again, during the public hearing, we're planning to have that time limited, anticipating we might have a lot of people show up, so, again, if the list is very short, we'll

have more time for folks to speak, but I'll get to that when we get to the public hearing portion of the meeting.

People will also be around afterward to answer questions that you might have. If you don't get the answer during the meeting, people will be available after the meeting as well.

As Kumar mentioned, this is one piece -- what we're here talking about tonight is one piece of what we call the Mayor's Clean Streams Healthy Neighborhoods Program. The piece we're talking about is highlighted there in blue. It's the raw sewage overflow long-term control plan that's required under the Clean Water Act, it's required by U.S. Environmental Protection Agency and the Indiana Department of Environmental Management.

So, that's the piece we're talking about specifically tonight and getting public comment on, but you should know that there are other things the city is doing to improve its sewer system and improve sewage treatment and storm water management within Marion County.

It's just not part of this long-term plan that we're talking about tonight. So, that includes our septic tank elimination program, which we'll be converting about 18,000 homes to sewers by 2025. That's an important priority for the city to get homes off of septic systems.

A sanitary sewer master plan has been put in place since Mayor Peterson came into office, and that is going to be addressing both current and future needs of the sanitary system, which is our separate sewer system, and I'll talk about the difference between the two in a second.

And then the storm water master plan is, again -- and there's a lot of parts of the county that have flooding and drainage problems, and, of course, we also have to look at flood protection, maintaining Eagle Creek Dam and those kinds of things, so there's a storm water piece, too, and all of those are managed by the Department of Public Works, with the help of the Clean Stream Team, so -- but

what we're here to talk about tonight really is that first piece.

I'm going to start with some background on the sewer overflow problem. For those of you who may not have been as familiar with this, we've had lots of meetings on this in the past, but just a quick refresher.

The problem that we have with our sewers is in the older parts of the city -- and I'll show you a map of where that is in a moment -- we have sewers that are designed to take both storm water and sewage from homes and businesses in the same pipe, and the problem that we have is when it rains, those sewers, in many places, get overloaded and can overflow right into our rivers and streams.

Now, they were built this way starting a hundred years ago, before we had indoor plumbing. We -- the city started building its first storm sewers throughout -- you know, if you think back a hundred years ago, we were in horse-and-buggy days and people had outhouses. Well, we started building storm sewers to

get -- to get rainwater off of the streets and away from the streets.

So, later on, people had indoor plumbing and they hooked those indoor plumbing pipes to the same storm water pipe, and that all went directly into our waterways. People got wise about not doing that after a while and we built our first treatment plants back in the '20's, I think it was, Carlton, the first -- the Belmont plant was built in --

MR. RAY: Yeah, '25, 1925.

THE HEARING OFFICER: 1925?

And so, we started to move into the age of a little bit more modern sewage treatment, and it's been a continual process of improving our sewer system over time and improving sewage treatment over time, but we're still stuck in the old city with these old combined sewers, and we've done a lot to improve the problem, but this is really going to require a big investment over the next few years.

What you see here in terms of the photos are some of the sites and the visuals

that people see in neighborhoods where they have to deal with sewer overflows, trash in the streams, you know, terrible odors, toilet paper hanging from trees, and it's pretty nasty for folks who have to live near that. It's not healthy for anybody who comes in contact with the water, and we're required under the Clean Water Act to do something about it.

This graph -- or this map shows where we have the different overflows, and I'll give you a little orientation here. This is the White River. It's the main river that we have in Marion County, and there are a number of smaller streams that flow into it: Fall Creek, Pogues Run, Pleasant Run -- Bean Creek flows into Pleasant Run -- and then Big and Little Eagle Creek are over here. We also have State Ditch and Lick Creek.

And the orange area on the map represents where we have these -- what we call the combined sewers that I had talked about, and that's kind of zoomed in, so the extent is: This is Meridian Street and 38th Street. The

upper area is -- you know, it goes into Broad Ripple and the Meridian Kessler area that we have combined sewers. The lower area goes down to, you know, south of Raymond Street, almost down to 465 in some of these older neighborhoods.

The western portion is, you know, along Eagle Creek, and it -- you know, out on I-70, near where Pleasant Run and Pogues Run cross I-70 is kind of the eastern extent of our combined sewer area. So, it's that whole area, about 55 square miles of Marion County, that have these older sewers.

Now, in the past we've had nearly six billion gallons of sewage that overflows into the streams in a typical year. That means 45 to 80 times a year, depending on how the rain falls, we have these overflows, and the dots represent the overflow locations. There's 132 spots sprinkled throughout the area that these overflows occur.

Now, we haven't just been doing planning and studies all of these years, and we

have a lot of projects that are already underway, what we call early action projects, that were going to be part of any long-term plan. EPA and IDEM agreed that these were projects that we needed to do, regardless of what the long-term plan turned out to be.

So, we've already invested more than 200 million dollars in early action projects, early improvements in the sewer system, reducing overflows by a hundred and forty-five million gallons a year, in a typical year.

Our proposed plan will do even more. I mean these photos show just a couple of the projects. The upper photo is of the East Bank Tank that we have along White River near IUPUI in White River State Park, a three-million-gallon tank, and the lower photo shows a project going on right now on Pogues Run to address a couple of overflows in that location, take them away from some IPS campuses, and underground, away from where people can come in contact with them.

It's also important to realize that

we're not alone in this problem. We are one of 770 communities in the country and a hundred plus in Indiana that have this problem. You can see that -- and especially in the Northeast and the Midwest, sewers were kind of built this way as those older cities developed, and then some on the West Coast. So, all of these communities are facing the same kind of requirements that we are and having to deal with this issue.

I'm going to take a few minutes to give an overview of the plan. Hopefully on your way in, you got a copy of the Executive Summary, which kind of goes through the plan and describes a lot of what I'm going to be describing tonight. Also available is the full plan on CD-ROM, so feel free to take that with you as well before you leave tonight.

First, whose been involved in the plan? Kumar mentioned a number of these. The Department of Public Works and its staff have worked, some people for more than ten years, on aspects of studying the sewer system.

The Indianapolis Clean Stream Team was formed in 2002, and that's a team of consultants and city staff that work together, where the consultants who are on the team work as an extension of city staff to plan, develop the plan, and to work to implement the plan and make sure that these projects are done on time and in budget.

The Clean Stream Team Advisory Committee that I mentioned earlier has also been instrumental in the development of the plan, and that is a committee that actually -- we combined two previous committees a couple of years ago to create the Clean Stream Team Advisory Committee. It was -- we had a Technical Advisory Committee and the Mayor's Raw Sewage Overflow Advisory Committee, and we combined them into the Clean Stream Team Committee.

Of course, we've been working with federal and state governments -- that's U.S. Environmental Protection Agency and Indiana Department of Environmental Management -- on

these issues over this whole time.

And the public has been very involved, as Kumar mentioned. In 2000 -- you can see the list of times we've been out to the public with elements of this plan, from 2000, when we did our first public education and input sessions, to 2004, when we had meetings in all of the watersheds to look at the different alternatives we were looking at and getting people's input about "How much are you willing to pay to address this issue, and how should we spend our -- best spend our money?" We also have speakers that are always available to attend meetings if anyone were interesting in that.

What are the goals of the plan? Our goals are really to dramatically improve water quality by reducing sewer overflows in a cost-effective manner. It's not to eliminate overflows, because that's not required, but it's to make sure that we're meeting our water quality goals and doing it cost-effectively.

We're also working to improve

neighborhood quality of life. There's a lot of folks who have to live in these neighborhoods, have to live with the sites and smells of overflows, and their quality of life is going to be improved considerably.

We're trying to improve our streams so that fish and aquatic life can thrive there. You know, these are urban streams and there'll be some challenges. We're trying to make sure that they can be restored and brought back to where they -- what they can achieve, and also, of course, to come into compliance with the requirements that we have in our permits.

I'm going to spend a few minutes talking about the major components of the plan, which are described in more detail in the plan itself and in the Executive Summary. A big component is the deep tunnel that we're planning that's going to run along Fall Creek and White River, starting up on Fall Creek near where the State Fairgrounds is. It's going to follow Fall Creek and White River down to our Belmont Treatment Plant.

And there's a map up here -- there's also a map in the Executive Summary -- that shows the intended route of that tunnel. We're still doing studies to make sure that's the right route. It's going to be deep underground, 200, 250 feet underground, to capture overflows, and I'll talk a little bit more in a minute about how that tunnel will work. It's a pretty typical solution that a lot of cities are using to solve these kinds of problems, especially the larger cities around the country.

Central treatment is part of our plan. We have two advanced wastewater treatment plants. They're the biggest and highest quality treatment plants in the state. We're just trying to get more flow to them so that we can provide a high level of treatment to them. Unlike a lot of cities, we're going to be providing biological treatment to these -- to our wet weather flows, and that's a -- we're very proud of that part of our plan.

And we're also building a new sewer

that's going to be connecting the two plants so that we can get more flows, especially the Southport, because often the Belmont plant is overloaded during a rainstorm, and the Southport plant has the capacity, so we want to better manage the flows between the two plants. The pictures here show a typical kind of tunnel construction, and then that's the Belmont plant there on the right.

Another element of our plan is inflatable dams and pinch valves. These are technologies we can use within the existing sewer system so that it can hold more sewage than it currently does, and we've installed ten of those already at various locations. It's helped to better use space, but there's a lot of places where we have large pipes that don't fill up all of the way, then the dams can help. In specific locations where we study and turn -- you know, find that they can work and help us to use our existing pipes better, that's a good cost-saving technology to use.

Pinch valves are much the same way.

The top diagram there shows an inflatable dam. A pinch valve is similar. It just opens and closes using some electronic devices.

Another key element of the plan is new, larger sewers. Along each of these streams we're going to have to build what we call relief sewers so that where our sewers are now overflowing along all of those points that I showed you earlier, instead of overflowing into the waterways, they're going to be overflowing into these new relief sewers.

And the relief sewers will be designed to capture that flow and take it either to the tunnel or directly to the treatment plant for treatment, so we make sure that those flows aren't going into the streams.

Storage tanks are planned in a number of areas where that made sense during our studies. One is already completed. It's that White River Tank that I talked about earlier, and as I said earlier, that's a photo of the White River Storage Tank under construction.

It's a three-million-gallon tank, about

the size of a football field, underground. If you go out there today, you won't even know it's there except for a little utility building that's there, and it's keeping a lot of sewage out of White River. That's one of our worst overflow points was right down on the White River, at White River State Park and IUPUI.

Another one or two tanks are planned along Pogues Run, and we're looking at different locations around the Spades Park area for those. And then we have an existing above-ground facility at the Riviera Club along the White River, and we're going to be upgrading that so that it can store sewage as well.

All of these storage tanks and the tunnel will work temporarily to store sewage. It's not something that we leave it there for weeks. These will be tanks that will store sewage and the tunnel will store sewage during a rainstorm, and then it'll -- when the storm is over and the sewer flows go down, we'll pump those flows out, down to our central treatment

plants for treatment.

Sewer separation projects. It didn't turn out that sewer separation across the county was the way to go, and I'll talk about that in a minute, but we are planning localized sewer separation, about a square mile of sewer separation, in a number of neighborhoods, and those are along the streams shown here, State Ditch and Lick Creek, White River.

The upstream ends of Fall Creek, Pogues run and Bean Creek, where it made sense can eliminate overflow, and those on the maps over here and the map up -- well, I think the map over here are shown in the darker green polygons are where we're doing sewer separation projects, so you're welcome after the meeting to take a look at the different watershed maps and see where we're planning sewer separation. The lighter green are parks, so it's the darker green is where we're doing some sewer separation projects.

The other thing that's part of our agreement with EPA and IDEM is a requirement

that we invest about 50 million dollars by 2015 to eliminate some chronic overflow problems that we have in the sanitary sewer system, and then three and half million dollars by 2010 on what are called supplemental environmental projects, and those are both septic tank elimination projects in the upper Meridian and down to the Southport neighborhood, so that's part of our requirements with EPA that we do those as well, and if you have questions about that, we can answer those as well.

Here's a map of the plan that I just talked about, and I'll just point out some of the key features. This red line here is the tunnel that we talked about earlier, the Fall Creek and White River tunnel. These dark lines are -- the black lines -- are the new sewers that are going to be built along a number of these waterways.

This is the interplant connect, the new sewer linking those Belmont and Southport plants. We show in green some of the sewer separation and septic tank -- those two septic

tank projects that I was talking about a moment ago.

And then the blue squares are the sanitary sewer projects that I just talked about that we need to do, the 50 million dollars in sanitary projects. You can see where those are located as well. And I know that's not easy to see, but the same map that's right here, you're welcome to come up and take a look at it later.

What's the schedule to get all of this done? We're planning to implement this in four- or five-year phases so that everything is done by December of 2025, and some people say, "Why 20 years? Why can't you get that done faster?"

Well, there's more than a hundred different projects that the city's going to have to let through this, and that doesn't even count the other three things that I talked about earlier: Our septic tank elimination program, our sanitary improvements that we have to do, storm water improvements.

So, we're going to be going -- a remarkable increase in the number and dollars that the city's going to be spending on projects, clean water infrastructure projects, in the next 20 years, and we need to manage that over time. We need to minimize the disturbance. We don't want to have all of the work going on all at once. Our people aren't going to be able to get to work or to their soccer games or wherever.

We need to evaluate the effectiveness of each project as it's completed so that if it's going to connect to another project, we can make that connection well and they fit together. A lot of land, rights of way that we're going to have to make sure that the city can secure, and that takes time dealing with property owners on those kinds of issues.

The one advantage of the tunnel, by the way, is that you don't have as much concern about the rights of way, although there are some property rights of people that we'll have to deal with, but you're not going to be taking

people's homes, because the tunnel can go under an urban area without disturbing the surface as much as a traditional sewer project would.

We have to coordinate the technical and manpower material needs. There are -- there's a lot of work being done by the city, by the state, by other communities facing this in the next few years, and there's a -- we need to make sure there's capacity in the construction market, in the design market, to get all of this work done in a quality way, so if you try to do too much too fast, you have the risk that you're not going to be doing it well.

And then obviously managing the financial burdens on rate payers by making sure that we can do those rate increases over time, in a gradual way, and not all at once.

Speaking of rates, the Mayor had estimated -- we've estimated that by 2025 the average residential sewer rate will go from where it is today, at about twelve dollars a month for 5400 gallons to fifty-five to sixty dollars a months. That's based on 2005

dollars. So, we're definitely looking at some increases in rates.

Our rates are among the lowest in the country right now, and a number of communities are paying thirty or forty dollars a month now for that level of service, so we're going to try to keep our rates competitive over time as other communities are doing these kinds of projects in the same time frame.

I'll talk about plan benefits here briefly. What is this going to do to reduce our overflows? The plan as designed will be capturing 95 percent of the wet weather sewer flows on Fall Creek and 95 percent on White River and other waterways.

Now, what does that mean? Ninety-five percent capture is sort of an EPA term that we all use. Translated into what you might relate to, 95 percent capture is equivalent -- or 97 percent capture is equivalent to about two storms a year that would cause overflows.

So, again, we're building, you know, a tunnel that's going to be what, 224 million

gallons or so underground, and that tunnel is going to hold a lot of water, but there are going to be some storms that are going to be too big and the flows are going to be too big for that tunnel, so there will be on Fall Creek a couple of storms in a typical year, and on the other waterways, four storms in a typical year, that are going to cause some overflows.

What kind of storms are we talking about? With the 97 percent, two overflow kind of control, it's almost -- two inches of rain can fall in a 24-hour period before we have an overflow, so that's a pretty big storm.

Ninety-five percent capture on the other waterways, that's about one -- a little over one and a half, 1.6, inches of rain in 24 hours we're capturing up to that storm. Anything more than that is going to cause an overflow, so that's what we call the level of control or how much -- how we're controlling the overflows.

We're capturing the first part of those storms, which is the dirtiest part, what's

called the first flush, that carries the major pollutants that are kind of in the sewers, and it's going to be the end of those storms that will still cause overflows.

Now, the other thing to remember is: We don't control Mother Nature and how the rain falls or how often it falls, so the actual overflow frequency is going to depend on the weather. There will be a range -- and I'll show you in a minute how that might work -- of zero to six per year on Fall Creek, and we predict zero to ten on the other waterways in terms of how often we'll have these kind of -- that big of a storm that will cause overflows, and that's based on 54 years of rainfall records that we've looked at. Now, these numbers are comparable to what other communities have been required to do in their plans and are facing the same kinds of requirements.

A couple of graphs to illustrate what I was just talking about. The first one looks at overflow frequency, and we've taken ten years

of rainfall data from 1991 to 2000 and took a look at what's the before -- what would the sewer system -- how often would it overflow before we did any improvements to it, and how often will it overflow in the future if we had the kind of rainfall we had in that year?

So, you can see, just by taking a look at 1992, for example, we had about -- it looks like 63, maybe 64 overflows before. In 1992, we would have had about 64 overflows from our sewer system due to the rainfall in that year. If we had had our plan in place, we would have had four on White River and the other streams, and two on Fall Creek, so that's -- that would be kind of a typical year that we might see.

But you can see there's a range. Some years we're going to have more and some years fewer. Over time, the average ought to come out to two on Fall Creek and four on the other waterways. It's a dramatic improvement over what people are seeing now, and again, it's the end of those storms, not the whole storm, that's causing an overflow.

Overflow volume is also going to be dramatically reduced from what I had said earlier, about six billion gallons a year, under the previous system, or the old system, our baseline conditions. We're going to be dramatically reducing the overflow volume, and this shows the -- for the full system, and then on -- the direct overflows onto each of the waterways, Fall Creek, Pogues Run, Pleasant Run, Eagle Creek, and White River over here on the right, if you can't see those from the back.

How do we know that the plan is doing what we said it would? We're going to have a compliance monitoring program in place before, during and after the plan is implemented, continued monitoring to track the performance of the facilities that we build, make sure they're doing what we said they would do. We're going to analyze the monitoring data by watershed as each watershed is completed, and issue a report on that watershed showing what the plan has accomplished.

We're going to keep working with our advisory committee and our business community and citizens and community groups as we implement the plan, and we'll be issuing milestone reports to EPA, to IDEM and to the public so that people can monitor what's going on. If you're interested in signing up for our Streamline newsletter or being on our mailing list, there's a sign-up in the back, and we can make sure that you get on the list of being distributed those kinds of reports.

Long-term benefits to the community, just to kind of sum up, we're going to be dramatically reducing our overflow volume and frequency, we're going to be dramatically improving the quality of our streams, especially when people are most likely to be using them, during the smaller storms. These large storms are going to have stream flows that aren't going to be safe for recreation anyway, and that's the main concern that we have with these sewer overflows is that people might be exposed to bacteria during the first

few days when it's still in the water.

We're going to eliminating those sanitary sewer overflows that I talked about earlier, enhancing urban streams and restoring our stream banks as well. Jobs are going to be created and economic development encouraged along the waterways as these waterways become less of an eyesore and more of an asset to the community.

Public comments. I'm going to talk a little bit about some of the comments we've gotten so far, just to answer some questions we've already gotten, and certainly if you have more questions or you want more explanation, we can do that. These are some of the questions we've already seen: "Why aren't you just separating the sewers?" "How will the tunnel work?" "Won't it contaminate the ground water?" And concerns about the projected rates, and "I can't afford them." "What about state or federal money; what's going on with that?"

First let's talk about sewer separation

briefly. I talked about 55 square miles in the combined system. That's 35,000-plus acres. We did review both complete and partial sewer separation during our analysis of alternatives, and we have materials here tonight. We did some pretty in-depth analysis early on of those various ways to do sewer separation, and it just didn't turn out to be cost effective or environmentally protective.

The big issues are the cost, six billion dollars to fully separate the whole system, you know, leading to rates that people can't even afford to pay. Fewer days actually meeting the recreational standards than we would have under the plan we've proposed, and that's because urban storm water itself carries a lot of pollution. We're going to be treating a lot of that.

There's, as I said, more pollution from urban storm water than if we got it to our treatment plants. And urban -- if you think about clear rainwater falling from the sky, but when it hits in the urban area, it picks up a

lot of pollutants.

Widespread disruption to the community by having to tear up nearly -- pretty much every street that's in that colored area. You know, here you can see we've divided up the combined sewer area into different watersheds, and we would have to tear up about every street, put in a new sewer.

Everybody would -- businesses, homes would all have to disconnect from the old sewer, connect to the new sewer. It's a pretty intensive disruptive process that -- most communities aren't going that direction. Those that have have regretted it and gone back to another solution.

Another thing that we're seeing is increasing requirements on urban storm water, if you look at what's happening in California these days. We're going to be looking at storm water requirements in the future that -- this plan will allow us to meet those in the combined area. We're going to have some issues with storm water. We want to make sure that

we're thinking ahead about what the storm water requirements might be.

A second issue is: How's the sewage tunnel going to work? And this animation will show how that works. Now, as I mentioned, we have these combined sewers that normally will take sewage to the treatment plants. You can see these are lines going into the sewer to the treatment plant. When it rains, the way it works now, these sewers are overflowing right into the river through this outfall pipe.

With the tunnel in place, instead of overflowing into the river, as the storm water comes into the system and fills up the system, it's going to be instead overflowing into the tunnel, and so the tunnel will be filling up during wet weather, as you can see here.

And then as -- when the weather clears up, the sewers are going to empty and the tunnel can then be pumped out. There will be a deep pump station and it'll be pumped out to -- well, we're planning to pump it into the interplant connect, the new pipe between the

two plants, or to the Belmont plant so that it can be treated at one of our two plants.

So, after the rainstorm, the tunnel's pumped out, the tunnel self -- cleans itself, and it's ready for the next storm. So, that's essentially how the tunnel will work. It's not going to be sitting down there permanently. It'll take two or three days for the tunnel to be pumped out and clean itself and be ready for the next storm.

What about ground water? That tunnel's going to be down there. How do we know that it's not going to contaminate our ground water? The tunnel is going to be designed and built so that ground water protection methods are going to prevent any contamination, and there are methods for doing that -- i can go into detail on that if you want -- in terms of putting grout and other systems in as you're constructing the tunnel to prevent -- both prevent ground water from coming in and taking up space in your tunnel, and prevent the tunnel from leaking out.

There's going to -- we're already starting to develop a computer model to look at the ground water impacts that might occur during construction and operation -- and this graphic shows just a little piece of that model -- making sure that we understand how it might impact ground water and the water supply. And it'll be updated and evaluated throughout, from planning, through construction, post-construction and operation of the tunnel so we're always monitoring the wells in that area and making sure that everything is fine.

Other questions that we've gotten is about the cost: "Why do we have to pay for this?" "It's too expensive." "I can't afford it." You know, all of those are very good questions. It's a huge expense. It's the largest investment we've ever made in our clean water infrastructure. We feel it's a worthwhile investment, but at the same time, it's something that's required by the Federal Government and yet the Federal Government isn't providing -- you know, handing over cash so

that you can implement this.

This graph shows over time, from the late 1970's until 2000, how federal investment has fallen. The yellow line is the federal in clean water infrastructure, and the blue bars are municipal spending around the country over that same amount of time on an annual basis. Federal investment is falling, it's being slashed. The federal -- there used to be federal grants, and we used those grants to build our Southport Treatment Plant back in the '70's. Now they offer loans. The loan fund itself has been slashed.

So, there's just a declining federal investment, despite the fact there's a gap that -- EPA, the Government Accounting Office, the Water Infrastructure Network have all identified a gap between what is being spent and what ought to be spent on this infrastructure in our country.

So, the City of Indianapolis and a number of other communities and organizations, environmental groups, engineering associations,

have banded together to support the creation of a clean water trust fund at the federal level. I just bring this to your attention as something that might help keep our rates down over time.

If you're interested, cleanwateramerica.org is the Web site where you can go, learn about the issue. If you're interested, you can sign on as a supporter, as the City of Indianapolis Department of Public Works has.

Now it's time for additional questions that you might have. This is the question part of the meeting. We're going to have a public hearing in a minute. Again, if you want to speak during the public hearing, please give us -- sign up out there so we can have your names, but first I'll just open it up for general -- any questions about the presentation I just made before we move into the public hearing.

Anybody?

MR. WOODY: Do you.

THE HEARING OFFICER: Could you come up to the microphone, please, just --

MR. WOODY: Oh, yeah.

THE HEARING OFFICER: And also, when you come up, if you could state your name. If it's a name that's difficult to spell for the recorder, just spell it for him.

MR. WOODY: My name's Tom Woody. I live in the neighborhood. I just wondered about two things. When you use the word "well," do you mean publicly owned well or privately owned well? And also, on a night like this, where drains get all stopped up and are plugged up with grass and junk, would it be helpful if they were cleaned by either a private person or a public -- you know, either way?

THE HEARING OFFICER: Thank you. Very good questions. I can answer the second one, which is yes. One of the things we recommend that people do is help keep the storm drains cleared of leaves and other debris. So yes, if people can help do that, private

citizens can help do that, that will help our system.

Carlton, do you want to help with the first question about wells?

MR. RAY: Yes.

I'm Carlton Ray, Deputy Director of DPW. We're looking at both public wells as well as private wells throughout the Fall Creek and White River corridors, so both of those well systems will be looked after, and we'll make sure we protect both of those type of wells when we build the tunnel.

THE HEARING OFFICER: Okay. Thank you.

Other questions?

Yes, sir. Could you come up to the microphone, please?

MR. ALTOM: My name is Tim Altom, it's A l t o m, an Irvington resident.

When I saw this in the newspaper, I was trying to figure out if this addressed kind of our concern. I mean we live on a street that has combined sewers --

THE HEARING OFFICER: Uh-huh.

MR. ALTOM: -- and pretty much any time it rains of any sort, a backup in our basement. So, originally I thought that's kind of what this was meant to address, but I don't see where this -- I mean is that meant to address those kind of problems that occur because of combined sewers?

THE HEARING OFFICER: That's another very good question.

MR. RAY: Sure.

THE HEARING OFFICER: Do you want to help with that one, Carlton?

MR. RAY: Yes, we are. We're looking at both the current carrying capacity issues as well as future carrying capacity issues with this plan. We have several different plans that Jodi talked about that -- besides the long-term control plan -- that also will increase carrying capacity within our system, with new sewers that are not associated with the long-term control plan, but will be done in conjunction with the long-term control

plan.

And so, we're very cognizant of the people with basement backups. We want to eliminate those. That's our long-term goal. It won't be done overnight, but we'll certainly have projects that we'll be implementing in conjunction with that.

The -- in your neighborhood, we're recently constructing a large -- large tunnel that's diverting flow away from the -- away from Pogues Run that -- and that sewage currently overflows near schools. We want to continue that process of getting sewage away from folks where it potentially is surcharging and getting to the larger sewers and getting down to the treatment plant.

We also have a program called correct connect, we we're reducing the amount of clear water that's getting into the system. It's surprising even today that people have downspouts and sump pumps connected to our sewer system that causes surcharging to occur. An eight-inch sewer line that could transport

about 200 homes -- sewage from about 200 homes can surcharge with as little as seven or eight sump pumps connected to that same sanitary sewer.

So, we want to get those sump pumps off the system and downspouts that are illegally connect, and that's another program that we have going on in conjunction with our long-term control plan and building larger sewers.

MR. ALTOM: How would we find out kind of what the plan is? You know, like the --

MR. RAY: Why don't we just answer your -- afterwards -- we've got a couple of folks, a couple of engineers that are going to set up afterwards, and we can talk to them then.

THE HEARING OFFICER: Uh-huh.

MR. ALTOM: All right.

THE HEARING OFFICER: Thank you.

And just for those who didn't catch it, when Carlton says "surcharge," he's talking about backup, so it might be backing up into a

basement, it might be backing up into a manhole. It's -- you know, the sewage is supposed to go one direction. Surcharge is when it's slowing down, backing up, and going the wrong way.

MR. RAY: Correct.

THE HEARING OFFICER: Right? So, that's the -- I'm not an engineer, I just translate for them.

Other questions before we move into the public hearing period?

MR. ADEN: Timothy Aden, A d e n. I live in Fall Creek Place. You mentioned large underground storage tanks as big as a football field.

THE HEARING OFFICER: Uh-huh.

MR. ADEN: Is it practical and feasible to develop the land that's on top of those is my first question. The second one is you mentioned biological treatment. I assume that is versus chemical treatment. Can you just talk about the biological and how that works?

THE HEARING OFFICER: Yes.

Do you want to try these two again, Carlton?

MR. RAY: Sure, and then you can translate.

(Laughter.)

MR. RAY: I think first I'll just talk about the underground storage tanks. We construct underground storage tanks in flood plains where normally development would not occur. The picture that we showed up there on the PowerPoint presentation was a new underground storage tank that we constructed just west of the IUPUI track.

That's in the flood plain. You can't see it. You go out there today, it's all underground. It's basically a football field underground in a concrete storage tank. It fills up with sewage during a wet weather event. After that wet weather event, we pump that sewage back in the sewers and we properly treat that at the treatment plant.

That sewage would have gotten away from

us previously in the White River State Park area, so we captured that. But it's in the flood plain, so we don't really allow folks to construct on top of that, on top of that area. We've got several that we're proposing -- or one that we're proposing up in the Spades Park area along Pogues Run, but that will also most likely be constructed in the flood plain. We don't have the final location selected as of yet.

On the biological treatment --

THE HEARING OFFICER: Okay. Carlton?

MR. RAY: Yes.

THE HEARING OFFICER: Sometimes is it possible to put like a soccer field or something like that on it?

MR. RAY: Yes, tennis courts, soccer fields, you know, frisbee fields --

MR. CERDA: Versus --

MR. RAY: -- different things like -- recreational areas.

MR. CERDA: Versus having a

Wal-Mart or something.

THE HEARING OFFICER: Yeah.

MR. RAY: That's correct. So, recreational fields are certainly a great solution for putting on top of this. Or just green areas, you know, good grass.

The other thing is, on the biological treatment at the two treatment plants, a lot of cities have just done -- let me take a step back. At our treatment plant, we have three phases of treatment: Primary, secondary biological treatment, and then tertiary, where we dientrify [phonetic] and break down ammonia.

Lots of cities across the country, when they're addressing this issue, will basically enlarge their primary treatment, will only go after the primary treatment. We did a lot of modeling in trying to understand what the effects that quality would have on our river if we expanded the treatment plants just for primary treatment, and we felt that as a city, just as a city -- it wasn't driven by EPA or IDEM, but the city -- we felt like we needed to

do much better than that, we felt like that we needed to go to the secondary, biological, treatment and treat that flow and break down soluble BOD, which is a problem for our streams. It's organic matter that gets into our streams, and we want to get rid of that. A lot of times with biological treatment, that wouldn't be addressed -- in mean in primary treatment, that wouldn't be addressed as fully as what we felt like it should be.

And so, we took that extra step in our plan and we've worked hard on, had a lot of good engineers, lots of scientists work over the last eight years on this issue, where we're going to expand our secondary treatment at both facilities.

And also we've gotten permits. IDEM has worked with us and gotten permits to -- or a permit to work -- to expand our secondary treatment at the Belmont facility, one of the first in the nation. Other cities are looking at this project, and we're very proud of it.

THE HEARING OFFICER: Thanks,

Carlton.

Just a little treatment plan primer -- and I'm going to get way out of my comfort zone here, but primary treatment is basically screening out the trash and the rocks and the debris and then letting it settle in big tanks and then letting the water flow off of that. So, it's kind of an early, you know, very simple getting the worst and the heaviest stuff out.

The secondary treatment is -- one reason it's called biological is it uses little bugs, little -- you know, that are natural in the environment that break down things in the environment, but it's concentrated and enhanced and accelerated, so that in a biological treatment system at a treatment plant, those bugs are working really hard to break down all of the waste that's in the water.

And then it goes to the tertiary, which is a filter system, and as Carlton says, breaks down the ammonia, which a lot of cities don't do tertiary treatment in this country.

And then the final step is disinfection, where you can use either chlorine or ozone gas is what we're --

Ozone gas; is that right?

MR. RAY: Yes.

THE HEARING OFFICER: -- is what we're moving to as a final disinfection to kill the final bacteria. So, that's kind of the process of treatment from primary to disinfection, and we're -- like Carlton said, we're proud of what we're proposing in this. Our wet weather flows are going to be getting some secondary treatment.

Okay. Other questions?

MR. CERDA: My name is Chad Cerda, that's C e r d a, also an Irvington resident. I originally was just a little confused by the sign-up process out front for the presenting part, so you can probably just skip over my name, because really I guess this focuses more on a question.

When you're talking about the overflow process, you had mentioned that the system is

going to work on effectively the tail end of the storm, after all of the waterways have filled up, but what we're finding, at least in a few of the blocks in Irvington, is that we're getting hit at the front end of the storm, say, within the first four hours.

In March, as an example, I had 26 inches of water within four hours in my basement, which was, you know, a remarkable feat, considering I'd never seen two inches for the last four years.

So, I don't -- my question's in two parts: What about the front end? And then what happened this year that was so different from the last three or four years, if something's changed within the city's sewer systems or the neighborhood or some -- something that got diverted that is making it a little bit more apparent to us in Irvington?

THE HEARING OFFICER: Okay. Thanks. Maybe I didn't explain clearly enough how the system's going to work. We're not waiting for the waterways to fill up. We are

capturing that initial part of the storm. It's that first part of the storm that's now going to be captured in the new, bigger sewers, in the tunnel, in the storage tanks.

So, we're getting the first part the storm, we're capturing it and storing it. It's the end of the storm that -- if it's a big storm. You know, we'll catch a lot of storms. Like those orange bars showed, we're capturing a lot of storms completely, but it's the big storms that are over and inch and a half or two inches, that final part of the storm is going to be causing some overflows into our waterways from these sewers.

So, I think -- it's not -- we're not waiting for the waterways to fill up. What gets into the sewers is going to be captured and treated at the first part of the storms, and in a lot of cases, the whole storm. It's just the big ones that we won't capture all of it.

Does that answer that question?

MR. CERDA: Sort of, yes.

THE HEARING OFFICER: Okay. Now, the second question about is there anything different that's causing more basement backups, I'll have to ask Carlton on that one.

MR. RAY: We don't know of anything that might have changed in your sewer downstream, but we certainly can take a look at it and we can send some crews out and just make sure that we don't have any blockages downstream. Sometimes kids get basketballs, lose different things that get into our sewers that we periodically pull out, which is an amazing number of things that we find in them. So, we televise sewers and then we clean them, and we certainly can take a look at, you know, what's going on downstream at your place.

THE HEARING OFFICER: Okay. Thank you, Carlton.

Other questions before I move into the public hearing portion?

Sir.

MR. LOGAN: Mike Logan, L o g a n. I live on the east side of the interceptor, and

it's up to capacity or over capacity right now, and I've noticed that most of the projects on the east side are going to be septic tank projects, which you're going to be putting in east side interceptor, which is overloaded now, then that means more sewage is going to get into my basement, and I was wondering why we couldn't improve the sewers, then put the -- take care of the septic tanks.

And one other thing I've got is storm water getting into Lick Creek. I live approximately a mile and a half from the north end of Lick Creek, and it overflows, and the only thing we've got is an interstate that dumps all of the water into Lick Creek, which makes it overflow.

And the State of Indiana, I had them out to look at the problem, and they said when they added the new lanes -- they've expanded to three lanes out there, and they said that they didn't have to go by Indianapolis codes, where if you pave over half an acre, you're supposed to make a retention system, and we've also had

businesses, apartment houses, all kinds of things that don't put retention systems in, and that needs to be addressed badly in Indianapolis. And it seems like nobody's doing anything about it. They're just letting everybody build anything they want.

Those are my comments.

THE HEARING OFFICER: Okay. Thank you, Mr. Logan.

Carlton --

MR. RAY: Sure.

THE HEARING OFFICER: -- do you want to help with that one, too?

MR. RAY: We're very familiar with Mr. Logan, and we've been out to his house several times. We're currently doing some work in the neighborhood. We understand your issue. We plan to do some improvements out there on the -- to the interceptors in your neighborhood.

On the storm water issue, we do have a permitting process. We do have folks taking a look at and reviewing all permits for the

improvements that are being made. We do have an engineer that's been hired to review those permits and issue permits based upon the information provided to us, and -- but we understand the issue of Lick Creek. That's a problem for us, and we need to address the problem that's coming off the highway. That's also an issue for us, too, and that's something we're looking into.

Thank you.

THE HEARING OFFICER: Okay. I should mention --

Hold on one second, Rae, because I'm going to start the public hearing, since we're getting comments now instead of just questions.

I should mention that the four components of the Clean Streams Healthy Neighborhoods program that I talked about before, we have maps in the back of the room that show projects that are planned around the county for each of those, so the one that you have up here is the raw sewage overflow long-term plan that I've been talking about,

but we also have maps about the septic system, where those neighborhoods are that are going to be getting sewers. That's the one with all of the green blotches on it.

The one with all of the purple blotches on it is the sanitary sewer master plan. That addresses issues outside the combined area, primarily where we have to do fixed rehabbing of the sewers and putting in new sewers to address growth and issues where the sewers don't have enough capacity.

And then do we have a storm map up? No. But the -- I think that map way over there combines -- these two maps here combine all of those three maps together. So, have fun with those later, after the meeting.

I'm going to move into the public hearing portion of the meeting and call people in the order that they --

Huh?

MS. SCHNAPP: I want to get my question in first.

THE HEARING OFFICER: You have a

question? Okay. I'm sorry. Come on up, Rae.

Rae has a question, and then we'll talk about the public hearing. If we have questions at the end, we can move into those, too. Okay.

MS. SCHNAPP: I have a couple of questions. One is whether or not the city has already taken steps to kind of step up enforcement on the illicit connections, the downspout connections and so forth.

And the other question has to do with treatment at the CSO outfalls. I know that kind of earlier in the process we were talking a lot about vortex separators and disinfection at the outfalls, and I didn't know -- I didn't see that as a component in the final plan, and I wonder if it was sort of embedded in there or not, and if not, why?

THE HEARING OFFICER: Okay. Good, good questions. The question about the end-of-pipe treatment I think I can answer.

Carlton, you can elaborate.

And we did look at -- and in fact, installed some screening and vortex separators.

We analyzed in our early analysis of alternatives the idea of putting remote treatment units out in the neighborhoods to treat at the end of the outfall pipes, and that did not prove to be either cost effective or environmentally protective.

Getting flow to our treatment plants, which are, as I said, you know, the biggest and best in the state, in our humble opinion, turned out to be the best solution for us overall, so remote treatment wasn't something that we carried into the final plan. It was something that we looked at earlier, but didn't prove to be part of the final plan.

And your first question was about enforcement of illicit connections?

Do you want to help with that?

MR. RAY: Yes. Also, just to follow up on the treatment plant issue, we discussed this in much degree with IDEM and EPA. Basically on end-of-pipe treatment, it's most likely where we use those high-rate primary treatment units.

We've done pilot testing at the plant, spent about a million dollars of our own money doing pilot testing, and the quality of those were not up to our snuff. We felt like it was better to get the flow to our treatment plant and go through both primary and secondary treatment, the biological treatment, versus just having end of pipe with a high rate of treatment.

The -- on the enforcement, what we're trying to do is do a carrot approach, and then with a stick. We're trying to go with working with folks, let them know that indeed they have problems, they do have a sump pump or downspouts connecting with them. We try to give them a period of time to get them -- get off the system.

If they don't get off the system, we follow up with additional enforcement. But what we'd like to do is, I guess, sugar and then -- use some sugar and try to get folks to understand, but they may -- from their sump pump that's connected to the sanitary sewer may

not be causing sewage to back up in their yard, but it could be backing up in Mr. Logan's house.

And so, we don't want that to occur. We want folks to get -- disconnect that. And we explained that, and folks started to understand that potentially it's not causing problems to them, but causing problems to neighbors, and they normally get their sump pumps disconnected.

Okay.

THE HEARING OFFICER: Okay. Thank you.

No further questions? Can I move into the public hearing?

(No response.)

THE HEARING OFFICER: Okay. If people have questions afterward, we can take them where we can break up and you can ask individual folks who are here. There's quite a few folks here who can answer different issues.

My first speaker is Sandhya Markand, who's with the Greater Indianapolis Chamber of

Commerce.

Sandhya, can you state your name and spell it, please?

MS. MARKAND: Yes. Thank you, Jodi and Kumar and DPW staff. My name is Sandhya Markand, S a n d h y a, last name is M a r k a n d. I'm with the Greater Indianapolis Chamber of Commerce. We are a nonprofit member-based organization that represents the business community.

Dating back to 1991, the Indianapolis Chamber of Commerce has been a strong advocate for updating the city's infrastructure system. Within the last five years, we have maintained our support to fix our sewers and clean our waterways by backing the storm water utility rates. The business community realizes the importance of a high-quality infrastructure system in order to increase the growth of economic development within our region.

We understand that the higher investments we make in the upcoming years will better our community as well as the expansion

of the business industry. Our members would like to ensure that the rate increase dollars are spent on projects designed to improve our sewers and water. The Indianapolis Chamber is pleased to see the city move forward with these projects and will continue to support this effort.

THE HEARING OFFICER: Thank you very much.

Rae Schnapp, from the Hoosier Environmental Council.

MS. SCHNAPP: Thanks. It's R a e, and the last name is S c h n a p p. Thanks.

I wanted to take a minute just to tell a little story. I think that this is a really important effort, and I want to congratulate the city for moving forward on it in a very serious way. A couple of years ago I had the opportunity to take some visitors from Milwaukee out to look at some aspects of our sewer system. They were interested in that because Milwaukee was sort of re-evaluating their sewer upgrades.

But we went out on a day similar to this one, a very hot day, and we found people along Fall Creek, quite a few people, sitting there with lawn chairs and fishing poles, their feet in the water, you know, really enjoying the stream. And just right while we were there -- and they didn't have their cameras -- the -- there was a cloudburst and it started raining really hard for a very short time.

And then the storm passed and a rainbow came out, and seriously, it was very photogenic, but those people did not move. You know, they stayed there, and I'm thinking that the sewers are probably overflowing and these people may or may not know that, but they're still in the stream.

So, I think that our use of the stream is an important focal point for many members of our community, and I think the process for this plan and its development has been a really solid process.

There are some aspects of it that we would like to see tweaked a little bit. We'd

like to see more emphasis on water conservation, and that is something that we have brought up over and over, but it seems somehow distinct from this planning process, whereas we see it more as inherently related, because if we can reduce or water use, we can reduce the flow in the sewer pipes, and possibly even minimizes our infrastructure expenses.

So, we'd like to see more emphasis on water conservation, and we would also like to see more emphasis on infiltration through something like leaching basins or constructed wetlands, biofilters. Of course, the downspout disconnection is an important factor, but what do you do with that downspout water? Well, one thing that a lot of cities have done is construct rain gardens and promote rain gardens. These are very popular in Chicago and Milwaukee.

So, there are ways to use the soil to filter that water and recharge the ground water and slow down the flow of our storm water

getting to the streams. I saw in the -- on the CD-ROM I saw some mention of the leaching basins, and there was kind of a dismissal of them because it said there was potential for ground water contamination, but I've seen several EPA publications that say these leaching basins are very effective, and I'd like to ask the city to take another look at that.

Again, those are kind of just tweaking the technical aspects of the plan. I guess our biggest concern is with the use attainability analysis part of the plan, kind of the last chapter, which, to paraphrase, is saying that since the waters have never met the water quality standards for recreation, the recreational use has not existed, and we know a lot of people are out there recreating in the stream, so we would hate to see that recreational use designation removed.

I think I'll stop there.

Thanks.

THE HEARING OFFICER: Thank you for

your comments. We appreciate it.

I next have Tim and Chad. Are you -- you don't need to comment?

MR. ALTOM: No.

THE HEARING OFFICER: Okay. Great. Thank you for coming and your questions, and we'll talk to you afterward.

John Trypus. Where's John? There he is.

MR. TRYPUS: My name is John Trypus, T r y p u s. I'm an environmental engineer.

I just wanted to comment on the Indianapolis long-term control plan in the coon text that I moved to Indianapolis about two years ago and spent over 30 years in Washington, D.C. and have personal involvement in working on their CSO long-term control plan.

In 2004 they implemented and signed a similar consent decree as Indianapolis has started the process, and their overall plan, a two-billion-dollar program, was similar, with a tunnel system, and provided a good benefit for

water quality at the best affordable rate, and just in reviewing the Indianapolis one, I think it's also a good plan that's good for the rate payers.

THE HEARING OFFICER: Okay. Thank you, John.

Is it Turae Dabney? Did I pronounce that right?

MS. DABNEY: Yes, you did. My name is Turae Dabney. That's T u r a e, and my last name is Dabney, D a b n e y, and thank you, and I'm here representing the Indianapolis Black Chamber of Commerce. Our organization's mission is to educate, advocate and enhance Greater Indianapolis through black businesses.

And the purpose of my comments today is to look at the economic development side of this project, and very simply, we want to encourage you and the city to comply with the 15 percent MB equal participation in the construction of this project. We are happy about -- and excited -- about the health improvements, but want to encourage, as I said,

again, to include -- have more inclusion of the 15 percent MB participation in accordance to the city's ordinance.

THE HEARING OFFICER: Okay. Thank you.

And that is the last person that I had signed up to be a speaker during the public hearing portion. Is there anybody else who would like to speak?

Yes, sir.

MR. ADEN: Timothy Aden, for the record, A d e n.

First of all, I'd like to thank you for moving forward with the project, and also for going over and above what the EPA required. Whenever you go over and above the call of duty, that's a good thing.

I think there are some additional -- or in addition to the practical benefits of reducing the overflows, there are some spin-off benefits. The waterways that would enjoy the greatest improvements or changes are the ones that are the most underutilized today, which is

why the project is so important.

Upon substantial completion, the waterways will become areas where people will actually want to congregate, which is different than the way they are now. Because these blighted areas are areas where people don't congregate but where they will, I believe there will be some economic development potential in the waterways.

One potential economic development benefit might be trying to attract water sports. I'm not sure if it's practical or feasible, I'm not sure if our waterways are wide enough or deep enough or configured in the correct way, but if they are and if we could attract a nationally recognized -- preferably nationally televised -- water sporting event, that would be a good feather in our cap as we move forward with this project.

In terms of the increase in tax, I am not an advocate of increased taxes, but I am an advocate of structuring tax increases appropriately, and I believe the structure is

appropriate. It's a little bit at a time, which is really good. Having said that, what's a little bit to me might be a lot to someone else, but I do believe that the structure is a good structure.

So, I ask that you all move forward with all deliberate speed, and I look forward to improving these assets.

THE HEARING OFFICER: Okay.

MR. ADEN: Thank you.

THE HEARING OFFICER: Thank you, Mr. Aden.

Anyone else?

(No response.)

THE HEARING OFFICER: Okay. I had all of these rules, but we didn't need to use them because we didn't have that many people sign up.

So, thank you all for coming. I'm going to let you mingle and ask questions informally after the meeting. Just a reminder, the full plan is available easily on CD-ROM as you go out the door if you don't already have

it, but people can also access it on the Web site.

There's hard copies at all of the Marion County Libraries and at our offices of the Clean Stream Team and the DPW Sherman Drive office. Anybody who wants a CD can have one by calling the Clean Stream Team office, and the number is there. If -- you're welcome to turn in written comments tonight by filling out the form that was available on the table as you came in, or the Web site.

If you want to expand on your comments and send in written comments, we welcome that. We're actually monitoring those regularly and posting comments we've received and responses on the Web site, so you can go there and look at those comments if you'd like. We're also taking them in writing to the Clean Stream Team address and -- or by fax; okay?

And finally, our next steps are -- we're going to be reviewing and responding to the comments that we've received during this comment period, which ends on August 18th, then

we're going to be finalizing the plan and submitting it to both EPA and IDEM for their approval.

We're going to continue moving forward with projects. Carlton is busy every day with planning, designing and construction of projects that are part of this plan as well as all of the other elements that we've talked about tonight. And then we're going to be reporting our progress to the agencies as well as to our advisory committee and to you, so sign up to be on that mailing list if you're interested.

And I think that is it. Thank you all for coming.

(Applause.)

- - -

Thereupon, the proceedings of August 3, 2006 were concluded at 8:17 o'clock p.m.

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CERTIFICATE

I, Lindy L. Meyer, Jr., the undersigned Court Reporter and Notary Public residing in the City of Shelbyville, Shelby County, Indiana, do hereby certify that the foregoing is a true and correct transcript of the proceedings taken by me on Thursday, August 3, 2006 in this matter and transcribed by me.

Lindy L. Meyer Jr.

Lindy L. Meyer, Jr.,
Notary Public in and
for the State of Indiana.

My Commission expires October 27, 2008.

CERTIFICATE

I, Lindy L. Meyer, Jr., the undersigned Court Reporter and Notary Public residing in the City of Shelbyville, Shelby County, Indiana, do hereby certify that the foregoing is a true and correct transcript of the proceedings taken by me on Thursday, August 3, 2006 in this matter and transcribed by me.

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Notary Public in and
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THE INDIANAPOLIS STAR

A GANNETT NEWSPAPER
★ INDYSTAR.COM ★

"Where the Spirit of the Lord is, there is Liberty" II Cor. 3:17

WEDNESDAY, JULY 19, 2006

Ex-worker embezzled $350,000, city claims

Staffer's theft from Indy parks agency went on for 6 years, according to charges

By Tim Evans
tim.evans@indystar.com

A former Indy Parks employee is facing charges that she steered $350,000 in public money to her own bank accounts in one of the metro-area's biggest public embezzlement cases in recent years.

Kenya Miles, who was fired Monday from her $25,000-a-year accounting job, obtained the money by directing bogus credit and debit card refunds to the accounts, according to preliminary charges filed late last week.

The transactions, some of which date to 2000, were discovered after a review of financial records that began July 7, when a bank alerted city officials to possible irregularities in a parks department account. City officials acknowledge that lax oversight contributed to the scope of the theft.

"There was clearly a breakdown in controls," said Kobi Wright, Indianapolis' corporation counsel.

Miles, 34, was arrested Thursday at her home in Hendricks County on a preliminary count of theft. She was processed at the Marion County Jail and released after posting a $7,500 bond.

Formal charges of theft, official misconduct and fraud on a financial institution are expected to be filed before Miles makes an initial court appearance July 26, said Helen Marchal, chief counsel for the

See Embezzled, Page A11

IN TODAY'S STAR

1ST BUSH VETO POSSIBLE TODAY

The Senate voted Tuesday to overturn the president's limits on embryonic stem cell research, setting the stage for President Bush's first veto. Both Indiana senators voted for the bill, which would restore federal funding for research. A3

TSUNAMI DEATHS EXCEED 500

Indonesia pledged to develop a warning system after a giant wave that hit the island of Java on Monday. The disaster, which left at least 275 missing, was triggered by an undersea quake. A10

WEATHER

Low 72 High 92
Party cloudy, light winds.
Full forecast, B6

$0.50

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$1.8 BILLION AGREEMENT

Sewer repair coming, but it will cost us

THE DEAL: Indy, EPA agree on plan to sharply cut overflow

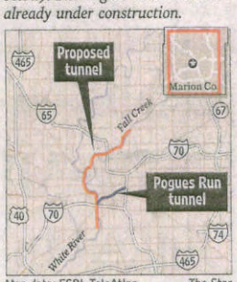
THE COST: In 20 years, average sewer bill to be $60

SAM RICHE / The Star

CHECKING: Jeremy R. Morris, the project's construction engineering section head, inspects the completed section of a wastewater tunnel, part of a $1.8 billion overhaul of the city's antiquated sewer system.

FEWER SPILLS, LESS MESS

Indianapolis' $1.8 billion plan will reduce the estimated number of wastewater spills into rivers and streams from 60 a year to roughly six with two new tunnels (shown below). The Pogues Run tunnel is already under construction.



Map data: ESRI, TeleAtlas The Star

Outdated system allows 7 billion gallons of wastewater into rivers, streams every year

By Tammy Webber
tammy.webber@indystar.com

Indianapolis residents will see their sewage bills go from among the lowest in the nation to about $60 a month over the next 20 years to pay for a huge, $1.8 billion overhaul of the city's antiquated sewer system.

The project, which city officials will announce today, all but settles five years of talks between Indianapolis and the EPA over a rejected $1 billion plan that the federal agency said wouldn't have done enough to protect people's health.

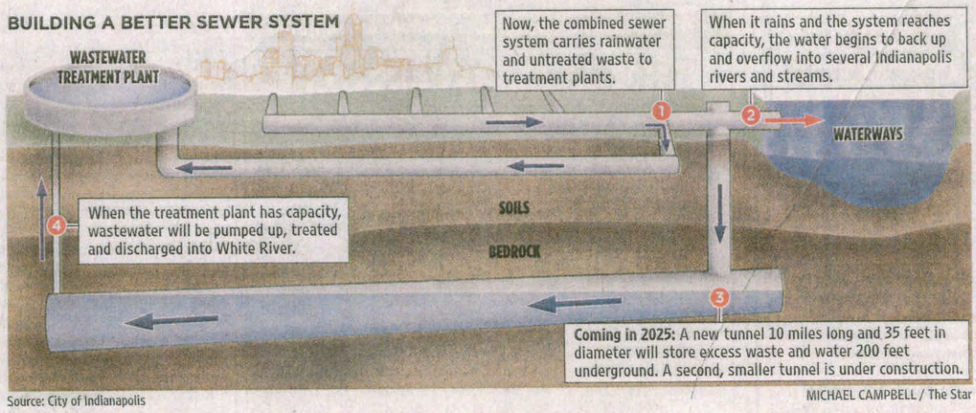
The tougher plan, which the EPA is expected to approve later this year, will increase sewer rates every year or two until 2026. Rates already have increased twice to pay for about $600 million in improvements. The latter of the two came last fall, when the City-County Council approved a series of rate increases under which average residential sewer bills will climb from $12.28 this year to $17.96 by 2008.

But rates will need to increase much more to pay for the largest capital improvement project in Indianapolis' history, including a 10-mile-long tunnel that, among other

See Sewer, Page A11

Are you willing to pay higher sewer bills to build the new system? Go to **IndyStar.com/feedback** to share your thoughts.

BUILDING A BETTER SEWER SYSTEM



Source: City of Indianapolis

MICHAEL CAMPBELL / The Star

Judg vacati court adjour

Hiatus tha people in b will help att catch up, jur

By Vic Ryck and Will Hig
vic.ryckaert@indy

A Marion Co went on vacation and shut down his for two weeks.

The break i Court Judge Bill Y has drawn criticis leaders, who s progress on hundr was a mistake as entered its worst years.

"The court had for two weeks," sa troller Robert Cl like a retailer clo cember. It's the bu the year."

Just last month freed almost 600 cause of crowding ond highest mass in the past six Marion County J near a mandatory cap of 1,135 repea mates wait for th move through the tem.

Young said th was designed to h in his court catch u work and settle a l through plea agre said that in the might help ease the jail.

Judges have th having commissio trates or other ju during an absence

Young oversees

See Vacatio

MIDEAST

KEVORK DJANSEZIAN

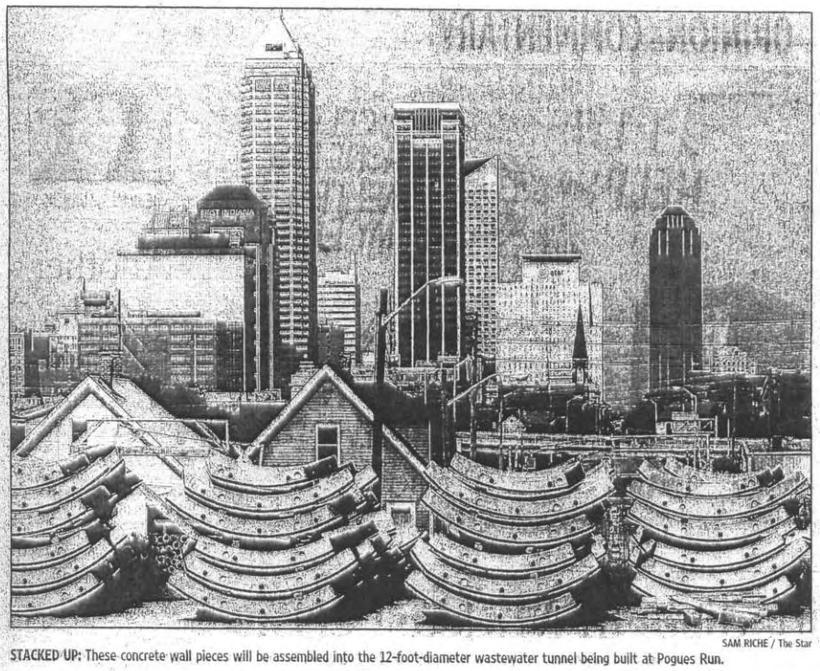
LEAVING LEBANO
rine helped an Ame and two children T they evacuated the bassy in the capita

EVACUA PICK UP

As many as 1,000 poised to leave the v nation of Lebanon to evacuation effort tha criticism for its relati compared to efforts

Violence continue Tuesday it is ready f attack against Hezbo ing hopes for a diplo

Coverag



SAM RICHE / The Star

STACKED UP: These concrete wall pieces will be assembled into the 12-foot-diameter wastewater tunnel being built at Pogues Run.

Sewer

✦ City agrees to pay fines to state, federal governments.

From A1

upgrades, are designed to dramatically reduce the number of instances each year that heavy rains or snows overwhelm the system and cause an estimated 7 billion gallons of wastewater to spill into rivers and streams.

The plan is intended to settle a longstanding enforcement action by the U.S. Environmental Protection Agency.

The $1 billion plan in 2001 would have cut overflows from about 60 annually to 12. But the EPA rejected that plan, saying the city could afford to spend more than twice that amount to further reduce the number of spills.

The payoff now will be cleaner waterways that finally could become destinations for recreation and a draw for economic development, officials said.

"There will be incredibly significant water-quality improvements throughout the waterways ... and they will become much more of an attraction than what's currently perceived as an eyesore," said Carlton Ray, the Department of Public Works' deputy director of engineering.

Now, sewers in some of Indianapolis' oldest and poorest neighborhoods overflow about 60 times a year, often after as little as a quarter-inch of rain.

Sewage and storm water are routed through the same pipes. When they're overwhelmed, wastewater, including raw sewage, pours out of more than 130 outlets — polluting waterways with an unhealthy mix of everything that's flushed down toilets and washed down storm drains.

Under the city's plan, 97 percent of wastewater will be captured along Fall Creek, reducing overflows to an annual average of two; the system will capture 95 percent of overflows on other waterways, reducing overflows to an average of four per year.

For Norman L. Davis, who has lived 49 years in a neighborhood near College and Sutherland avenues, the improvements can't come soon enough. Nobody uses nearby Fall Creek anymore, he said, and it often is the source of stomach-turning stench.

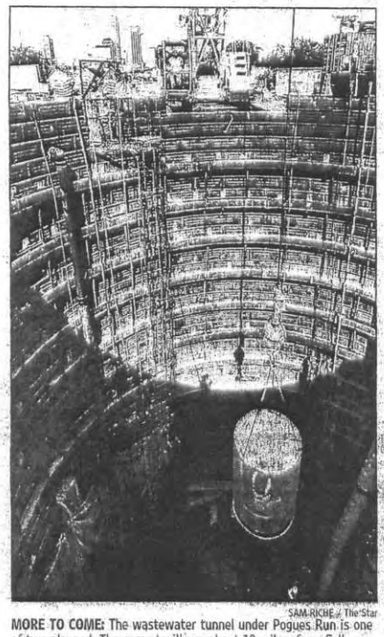
"At night, you can smell it real bad," said Davis, pointing toward an overflow outlet. "I love this neighborhood, but the smells bring down the property values — you know people making $200,000 a year don't want to live around here."

"Sometimes you almost want to throw up," said his neighbor, Virgie Thurman, 68.

The centerpiece of the city's plan is a giant tunnel that will run about 10 miles, from Fall Creek at 38th Street to the Belmont Treatment Plant.

Storm water will be diverted to the 35-foot-diameter tunnel, rather than to rivers or streams, where it will be held until it can be treated. Construction of that tunnel, about 200 feet underground, will begin in 2010 and be completed by 2025.

A new pipe will connect the city's Belmont and Southport treatment plants; now, wastewater often overflows from the Belmont plant when Southport has reached treatment capacity, Ray said. The plants also will be upgraded, and sewers and storage basins will be built throughout the city as part of the project.



SAM RICHE / The Star

MORE TO COME: The wastewater tunnel under Pogues Run is one of two planned. The second will run about 10 miles, from Fall Creek at 38th Street to the Belmont Treatment Plant.

THE ISSUES

The problem

When it rains or snow melts, the city's 100-year-old combined sewer and rainwater system is quickly overwhelmed, sending untreated sewage and storm water into many of the city's rivers and streams.

The solution

To reduce overflows in all but the biggest storms, the city plans to dig a new deep tunnel along White River and Fall Creek and a smaller tunnel along Pogues Run, build new underground storage tanks and sewers and upgrade its two wastewater treatment plants.

Costs and benefits

Average monthly sewer bills for residential customers are expected to reach $60 by the time the $1.8 billion project is completed in 20 years. Wastewater overflows will be reduced from 60 a year to two a year on Fall Creek and four a year on other waterways, including White River.

Source: City of Indianapolis

WATER WORRIES

In water, E. coli itself is not harmful but is measured because the bacterium's presence signals there probably are other, harmful pathogens that could cause stomach and intestinal ailments. Higher E. coli levels indicate a greater chance a person could get sick. Shown below are the highest five-year averages for E. coli in Indianapolis, based on tests conducted by the city during the recreational season, April through October, from 2001 through 2005.

The standard for E. coli in Indiana waterways is 235 colonies per 100 mL.

Location	Colonies
1. White River at Tibbs Avenue and Banta Road	3,520 colonies
2. Pogues Run at New York Street	2,849 colonies
3. Pogues Run at Emerson Avene	1,502 colonies
4. Bean Creek at Southern Avenue	1,431 colonies
5. Pleasant Run at Meridian Street	1,088 colonies

Note: E. coli is reported as the number of colonies per 100 milliliters of water.

Sources: Indianapolis Office of Environmental Services, U.S. Environmental Protection Agency

MICHAEL CAMPBELL / The Star

WHAT'S NEXT

✦ **A 30-day public comment period** begins today. Copies of the plan are available at the DPW engineering office, 604 N. Sherman Drive; Indianapolis Clean Stream Team office, 151 N. Delaware St., Suite 900; and at all Marion County Public Library branches. It also can be viewed online at www.indycleanstreams .org, or an electronic copy (compact disc) is available by calling (317) 327-8720.

✦ **A public hearing is scheduled** for 7 p.m. Thursday, Aug. 3, in Room 105 at Good Hall, University of Indianapolis, 1400 E. Hanna Ave.

✦ **After the comment period,** the city will submit the final plan to the U.S. Environmental Protection Agency and the Justice Department.

✦ **Once the plan is approved,** the parties will sign a consent agreement. The DOJ will file a complaint in U.S. District Court, along with the consent agreement and plan.

✦ **Another 30-day comment period** will be held on the consent agreement, after which the consent decree must be filed and signed by a judge.

Source: City of Indianapolis

LOW RATES TO EVAPORATE

Right now, Indianapolis' sewer rates are among the cheapest in the Midwest. That could change with the $1.8 billion overhaul.

Indianapolis	**$12.38**
Danville	$34.34
Zionsville	$34
Cincinnati	$33.71
Hamilton SE Utilities	$33.55
Noblesville	$29.20
Fishers	$26
Speedway	$25.56
Columbus, Ohio	$23.02
Lawrence	$22.87
Louisville, Ky.	$22.60
St. Louis	$20.97
Beech Grove	$20.82
Evansville	$20.38
Fort Wayne	$16.24
Greenwood	$16.21
Carmel	$14.65

Source: Indianapolis Department of Public Works

The Star

The city also agreed to pay cash fines of $588,900 to the federal government and $58,890 to the state of Indiana. In lieu of larger fines, the city will spend $3.5 million to eliminate septic systems in two neighborhoods. The plan is open for public comment until Aug. 17.

The city already has spent $200 million — part of the $1.8 billion total — to address the problem. Those projects include storage basins and the installation of inflatable dams in sewer pipes. The city has approved another $400 million in related projects.

Neither EPA nor Justice Department officials would comment because the consent agreement was not expected to be final until later this year.

"We think this was the right plan; we've been talking to people for years," said former DPW Director Jim Garrard, recently named Indianapolis' director of economic development. "This is a large quality-of-life issue for folks who live near these tributaries and have to deal with the stench and the debris and all the bad stuff that comes along with (overflows)."

★ **Call Star reporter Tammy Webber at (317) 444-6212.**

Embezzled

✦ Thefts occurred while Indy Parks was cutting back.

From A1

Marion County prosecutor's office.

Marchal said additional charges may be filed after investigators finish reviewing financial records.

The thefts occurred during a period when Indy Parks was forced to cut back on trail cleaning, curtail hours at some swimming pools and delay repairs and construction projects to cope with budget constraints.

Wright, who noted he is unaware of any theft of city funds of this scope during Mayor Bart Peterson's administration, said the credits that Miles processed were presented as refunds to residents who had paid in advance for park services, such as facility rental or program fees.

Inadequate supervision

The biggest public embezzlement in state history involved a former Family and Social Services Administration employee, David Scott, who was sentenced in 1999 to at least four years in prison for stealing more than $700,000.

James Spaulding, a former employee of the Indiana Public Employees' Retirement Fund, was sentenced in May 2004 for his role in the theft of more than $220,000 in retirees' funds.

In the Indy Parks situation, Wright said, city officials acted quickly after learning of the potential problems but acknowledged inadequate supervision of the parks department's $30 million annual budget.

He said a 20 parks accounts by apolis-Marion Cou Audit Agency call tional oversight o process, but the c not fully impleme added the city ceased the practic electronic refund and credit cards.

Arrested at her

There is no tel ing for Miles in th lis area, and she reached Tuesday ment.

Court docum that Miles "beca and left the offic officials question Wednesday about funds — and did work the next da

When police w home Thursday Drive in eastern County, she "c stealing large sum from the City of I court records stat

A search of he vealed several cards which Mile to obtain the frau refunds, documen Investigators also four Michigan dri — bearing the nar Miles with bogus ity numbers — wh were used to op counts.

Police reported other, undisclosed the home and a SUV in the drive gators also seized item in a search residence owned Tybalt Circle, so 62nd Street in Ma

★ **Call Star reporter (317) 444-6204.**

"If something as insignificant a judge going on vacation can cr significant problems with capa that illustrates ... we haven' addressed the underlying probl

Ken Falk, legal director of ACLU of Ind

Vacations

✦ Court has 354 defendants in jail on pending cases.

From A1

felony drug court, one of the county's busiest, with 1,251 pending cases. Defendants in Young's court include accused cocaine dealers, methamphetamine manufacturers and people suspected of serious drug use.

"I've got lawyers with 150 cases apiece who barely have time to look at their cases," said Young, reached in Indianapolis where he was attending a meeting Tuesday. "I'm just seeing if I can make a dent in my caseload by giving the lawyers some breathing room."

He said he expects to be back in his office Friday.

Young's court, records show, has 354 defendants with pending cases sitting in the Marion County Jail. No other criminal court even comes close.

The drug court, records show, has an additional 316 defendants whose cases have been closed sitting in jail, but it's unclear whether those inmates are awaiting sentencing or being held on charges in another court.

"The fact is I need more prosecutors, I need more public defenders," Young said. "You can have a hearing every day, but if the lawyers have done no work on it, we get nowhere."

Marion County Prosecutor Carl Brizzi, who is pushing a plan to ship some inmates out to a state prison to try to free up jail space, questioned Young's decision.

"I wouldn't feel comfortable taking that much time off," he said. "However, rather than casting blame, we need to all work together to do everything we can to move people through the system so there's room in the jail."

Mayor Bart Peterson called the shutdown disturbing, given that the county jail has freed hundreds of inmates in recent weeks.

One of them, a convicted child molester, was later accused of fondling two young girls within days of going free.

"We all have to do our part systemwide to address this very serious issue," said Justin Ohlemiller, Peterson's spokesman. "The news of this court closure is extremely disappointing."

Others working to solve the county's jail problems were slower to criticize

A judge's vacat of my business," Sheriff Frank An oversees the jail. " is sheriffing."

Without the ju it becomes difficu cases, said County Anne Sadler.

"It's the judge the case through she said. "But ever tled to take a vaca

The jail has bec scrutiny of a fe since the Indiana ties Union brough poor conditions a the 1970s. Ken Fa director of the now called the An Liberties Union said Young's vaca scored the conti lems with the syst

"If something cant as a judge go tion can create problems with c said, "that illustrat haven't addressed ing problem of, enough capacity?"

Young went on a month in Brown unteering at a su For two weeks, f and commissione trates presided ov

An acting judg overseen the court first two weeks court shut down c

Several lawyers his magistrates als ing out of town time, which in Fourth of July ho said. He sat down vising prosecutors defenders, and You agreed that closir would benefit the than bringing in judge.

"We planned month and a half," adding that officia able to assess the month. "I think w down in August what dispositions

But another jud Young, is consider most active in try the jail problem, whole vacation i rassing.

"You don't wan thing to attract p tion, to have peop don't work hard," Mark Stoner. "I how you justify court."

★ **Call Star reporter \ at (317) 444-2761.**

$1.8 billion upgrade for sewers outlined

Smelly streams hurt property values and are a health risk, Peterson says

By Tammy Webber
tammy.webber@indystar.com

Leon Bates listened happily Wednesday as Mayor Bart Peterson outlined a $1.8 billion plan to fix the city's overflowing sewers, despite nearly 20 years of sewer-rate increases that will be needed to help pay for it.

"This is the first time I've heard any mayor say we truly have a problem and it needs to be fixed and the fix will not be cheap," said Bates, who lives in the Mapleton-Fall Creek neighborhood on the Near Northside, where residents are often besieged by putrid odors caused by sewer overflows.

"Sewer rates have been artificially low for way too long; we've known about this problem for 30 years and didn't do a . . . thing."

Peterson, as expected, announced a tentative agreement with the U.S. Environmental Protection Agency that calls for the city to reduce overflows to an average of two per year on Fall Creek and four per year on White River and other streams. Now, sewers in the oldest parts of the city overflow about 60 times a year or more, inundating waterways annually with 6 billion to 7 billion gallons of wastewater contaminated with raw sewage.

The century-old system was built to carry untreated waste and storm water in the same pipes. But as the city developed and flushed more waste into the system, the volume became too great to handle.

Sewer rates will rise every year or two until at least 2025 — to about $60 a month — to pay for the fix, which includes a 10-mile-long deep tunnel, holding basins and upgrades to the city's two treatment plants.

Now, Indianapolis' average monthly sewer bill is just over $12, among the lowest in the nation. But even with the increases, the rates in 20 years probably still will be lower than in many other cities, Peterson said, adding they will be raised incrementally to allow residents to adjust to the changes.

The plan is subject to a 30-day public comment period, which ends Aug. 18. A public hearing will be at 7 p.m. Aug. 3 at Good Hall, University of Indianapolis, 1400 E. Hanna Ave.

Peterson said the sewer problem has reduced property values and unfairly subjected older neighborhoods to the stench and health risks. He said the decrepit sewers and filthy water also have hurt the city's reputation — and recalled how politicians and others used to joke about the smelly streams.

"It should never have been a joke," Peterson said. "It should have been a source of shame."

The improvements, he said, should go a long way toward making the city's waterways a source of pride, enhance recreational opportunities and help lure development and new residents.

"This is going to make our city easier to sell," Peterson said.

Bates said he's happiest for the families who live near the sewer outlets.

"You know that black and gray matter at the bottom of the river? That's not mud," he said. "This is what some of the kids play in."

★ Call Star reporter Tammy Webber at (317) 444-6212.

THE PRICE OF PROGRESS

Indianapolis residents' sewer bills will rise to pay for a $1.8 billion plan to dramatically reduce sewer overflows into area waterways. Average monthly residential rates will rise from about $12 now to about $60 by 2025. The City-County Council already has approved rate increases through 2008, when the average sewer bill will climb to $17.96 a month.

The city also already has completed or approved $600 million in construction projects as part of the overall plan, including:

- A 34 million-gallon storage basin at the Belmont Treatment Plant and a 25 million-gallon basin at the Southport Treatment Plant.
- Diverted overflows from outlets at the Riviera Club on White River into an existing million-gallon underground holding tank. A third overflow point also will be diverted to the tank.
- A 3 million-gallon storage tank just west of the track at Indianapolis University-Purdue University Indianapolis.
- Inflatable dams in some large sewers, designed to store wastewater in the pipes but release it before it can back up into basements.
- Expanding treatment capacity at the Belmont Treatment Plant. Overflows from the plant were one of the largest single sources of pollution to White River.
- A 12-foot-diameter sewer pipe between the Belmont and Southport plants, allowing wastewater volumes to be equalized.

Source: Indianapolis Department of Public Works

OPINION&COMMENTARY

THE INDIANAPOLIS STAR
A GANNETT NEWSPAPER

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EDITORIALS

No getting around sewer price tag

Our position:

Agreement with the federal government means the city can move ahead on a huge, costly, necessary infrastructure task.

There's nothing sweet about a nearly five-fold increase in sewer bills over 20 years, but a great many folks around here are not likely to cry foul. They know foul.

It is common knowledge, or should be, that Indianapolis is decades late in overhauling a sewage system so undersized and outdated that it spews the contents of toilets into streets and waterways an average of better than once a week. Older, lower-income neighborhoods, a key element of the city's revitalization, bear the brunt.

The Peterson administration has been hard at work on improvements, having invested some $600 million even though the U.S. Environmental Protection Agency rejected the city's original plan for a $1 billion project.

Wednesday, the city and the feds announced a settlement under which a total of $1.8 billion will be spent to enlarge and modernize the system, reducing anticipated overflows to two a year along Fall Creek and four on other waterways.

It's not free. Sewer bills will rise gradually from the current $12.38 to $60 a month by 2026. If it's any comfort, we've been spoiled. Zionsville residents now pay $34 a month, Cincinnatians just under that, users in Columbus, Ohio, a little over $23. All those rates figure to rise over the next 20 years as well. If they do not reach our level, those communities also haven't matched our overflow.

Unfortunately for local residents, federal and state funding help for meeting these federal and state mandates has declined in recent years. To their credit, city officials are not whining. "It's less than it used to be," lamented Deputy Mayor Steve Campbell. "But it's the right thing to do, federal money or not, state money or not. We've been negotiating with EPA for seven years, and we've been moving ahead anyway."

Only by paying now, and paying later, can the city move ahead in the broader sense. Without basic protection of public health, economic growth will always be stunted.

Associated Press

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e people who have gone
program have provided,
their lives."

$1.8B sewer plan gaining support

Community leaders praise effort to reduce the amount of sewage released into waterways

By Diana Penner
diana.penner@indystar.com

A public hearing Thursday on a proposed $1.8 billion improvement to the city's combined sewer system drew praise from those who attended.

The city's plan features a huge, 10-mile-long tunnel about 200 to 250 feet underground and large storage basins that could temporarily hold overflow water and sewage until it can be pumped into treatment facilities.

Sandhya Markand, with the Greater Indianapolis Chamber of Commerce, praised the plan, and Turae Dabney, with the Indianapolis Black Chamber of Commerce, urged the city to seek minority contractors to do 15 percent of the work.

While Rae Schnapp, with the Hoosier Environmental Council, also praised the process so far, she urged greater emphasis on water conservation to reduce the amount of water getting into the sewers in the first place. She also called for increased use of natural filtration systems such as wetlands and rain gardens to slow the flow of storm water into streams.

The new system is projected to significantly reduce but not completely eliminate overflows of untreated sewage into local waterways.

The problem has been building for much of the past century and would require about two decades of construction work — and incremental sewer rate increases, officials said.

Sewer bills are projected to increase from the average today of about $12 per month to about $60 per month by 2025, but overflows would decrease from an average of 60 times a year now to two annually into Fall Creek and about four a year into White River and its tributaries.

Last month, Mayor Bart Peterson announced the plan and a tentative agreement with the U.S. Environmental Protection Agency. The public comment period continues through Aug. 18.

Indianapolis — like other cities primarily on the East Coast and in the Midwest — has a combined sewer system in the oldest parts of the city. Storm water sewer systems were developed before most residents had indoor plumbing. As homes were built or retrofitted with indoor toilets and bathtubs, residential sewage lines were hooked into existing storm systems.

Now, in heavy rains, the system can back up and dump untreated sewage into White River, Fall Creek and other waterways.

★ Call Star reporter Diana Penner at (317) 444-6249.

TO COMMENT

The public may submit comments on the city's plan to control raw sewage overflows.

Comments can be submitted through Aug. 18 online at www.indycleanstreams.org; by fax to (317) 327-8699; or by mail to City of Indianapolis Long Term Control Plan Comments, c/o Indianapolis Clean Stream Team, 151 N. Delaware St., Suite 900, Indianapolis, IN 46204.

The plan is available online at the Web site listed above and at all Indianapolis-Marion County Public Library branches. It also is available on CD through the Web site or by calling (317) 327-8720.

A LIFE LIVED: Louis McFadden Jr., 196

Water Pollution

Indianapolis to Settle Sewer Violations Through $1.8 Billion Plan to Stop Overflows

The Environmental Protection Agency and the city of Indianapolis reached a tentative agreement to settle water quality violations and reduce sewage overflows into the city's waterways with a plan that calls for a $1.8 billion investment by the city over 20 years, a city Department of Public Works official told BNA July 20.

“We've tentatively reached agreement with EPA and the state regulatory agency. We feel like we have a good plan,” Carlton Ray, deputy director of the department, said.

The city must pay pending fines and make investments in its sewer system by certain deadlines to comply with the agreement. The settlement must still be approved by EPA and the Indiana Department of Environmental Management and filed in the U.S. District Court for the Southern District of Indiana along with a consent decree, Ray said.

Under the proposed settlement, the city would agree to invest:

- $1.73 billion by December 2025 to significantly reduce raw sewage overflows from the combined sewer system;
- $50.4 million by December 2015 to eliminate chronic overflows from seven locations in the separate, sanitary sewer system; and
- $3.5 million by December 2010 on supplemental environmental projects to eliminate septic systems in two neighborhoods.

The city also plans to spend an additional $64.3 million on watershed improvement projects, such as stream bank restoration and stream flow augmentation.

If the settlement is approved, the city will also pay $588,900 to settle violations of the federal Clean Water Act and another $58,890 to resolve state violations.

A public comment period on the plan ends Aug. 18.

Violations Cited.

EPA cited the city for alleged violations related to sewer overflows and flow maximization issues, Ray said.

“We even have some difficulty getting the sewage to the treatment plant,” he said.

Sewer overflows are common in the current system. They happen 60 to 80 times each year and can be triggered by as little as a quarter-inch of rainfall, Ray said.

Under the plan, the city must reduce the number of annual overflow events to four in a typical year, he said.

Among the projects planned to solve those problems is a 224-million-gallon tunnel along two waterways--Fall Creek and White River--that will store sewage overflows during rainstorms and pump

the sewage to the city's wastewater treatment plants after the storm subsides, according to a statement from the mayor's office. A 12-foot-diameter sewer connecting the city's two treatment plants will also allow the city to better manage and treat flows during wet weather, the statement said.

The city has been making investments to address the problem.

“Since 2000, the city has spent more than $200 million to reduce raw sewage overflows by 145 million gallons per year,” Mayor Bart Peterson said in announcing the agreement July 19.

Ray said the city and EPA have been negotiating about the sewer overflow issue for five years.

EPA declined to discuss the settlement because it has not been officially approved, Phillipa Cannon, an agency spokeswoman in EPA's Region 5 office in Chicago, said.

EPA Requiring Plans.

Jodi Perras, an environmental consultant with Indiana-based Perras & Associates, told BNA July 19 that the combined sewer overflows can be attributed to an aging infrastructure.

The agreement reflects the 1994 Combined Sewer Overflow guidance that EPA issued in lieu of rules to deal with incessant overflows from collection systems that were built at the turn of the 20th century to deal with stormwater as well as wastewater.

These combined systems are designed to overflow during wet weather, releasing the untreated wastewater into nearby rivers and streams to prevent excess flows from inundating the treatment plant. These overflows cause the receiving waters to become contaminated with pathogens and other pollutants in violation of water quality standards.

The guidance called upon utilities to assess the reasons for combined sewer overflows and to devise plans for minimizing flows. The agreement with Indianapolis, Perras told BNA, reflects the solutions Indianapolis devised to deal with its aging infrastructure.

According to EPA, 772 communities in the United States have combined sewer systems, and Indiana has the most with 104.

The combined sewer overflows guidance was codified into law in 2000. Among other things, it required municipalities to put into place “nine minimum controls.”

These controls require proper maintenance of the sewer system, prohibit overflows in dry weather, establish pollution prevention practices, and require public notification of overflows. The controls are supposed to be implemented while the communities develop plans to eliminate overflows.

In February, a group of 27 advocacy organizations released a letter charging that EPA was failing to enforce clean-water laws in cities with histories of overflows from combined sewer systems (32 DEN A-8, 2/16/06).

By Joyce Hedges and Amena Saiyid

Comments Received on Indianapolis Long-Term Control Plan and City Responses
September 6, 2006

Comment: Will this new sewer fix clean up Pleasant Run Creek? I've lived in Christian Park for 65 years and it hurts my soul to see such a mess in the creek. We used to have frogs, small fish and other critters but no more. I'm more than willing to pay for the cost of the sewer clean up! (S. McCardle, Indianapolis)
Response: Yes, the city's plan will dramatically reduce overflows into Pleasant Run and also Bean Creek, which is a tributary of Pleasant Run. We have posted fact sheets for each watershed on the website to describe how the plan will benefit Pleasant Run and the other waterways.

Comment: I'm so glad this problem is getting attention. It's past due. (S. Shaw, Indianapolis)
Response: Thank you for your comment and support.

Comment: I'm glad to see this plan. It's long overdue, and needs to be moved forward as rapidly as possible. The health of the citizenry and the environment both demand its completion as soon as possible. (W. Gillette, Indianapolis)
Response: Thank you for your comment. The plan will be implemented in four five-year phases, with all projects complete by December 31, 2025. The 20-year schedule is needed to minimize disturbance to neighborhoods; accurately evaluate the effectiveness of each project; secure rights of way; coordinate technical, manpower and material needs; and manage the financial burden on ratepayers. We are implementing projects as expeditiously as we can.

Comment: I believe something should be done with the overflow of sewage, but this is terrible. I am a senior and do not make a lot of money, in fact less than $800 a month. Now you are talking about a $60.00 sewage raise and then you want a water raise in our bill. I ask you how much can a person take, especially when you don't make that much. Since the governor sold our roads and now it will be a toll road, why not take that money and leave the people alone, we can't afford all this. After this is all done then there will be something else Indy will need to do. I don't want to have to sell my home to pay for all these things, I just want to live in peace. Thank you for letting me speak and may I say this God Bless us all, we do need help, but there are other ways. Thank you. (M. Owens, Indianapolis)
Response: Thank you for your comment. We sympathize with your concerns and worked hard to protect ratepayer interests during negotiations with state and federal regulators. It's important to point out that rates will rise gradually over 20 years. However, we have no choice but to do what is required by the U.S. Environmental Protection Agency and the Clean Water Act. We agree that state and federal funding should help pay for these projects. Unfortunately, at this time local ratepayers are being required to bear the burden. Currently, state and federal governments offer low-interest loans for sewer projects. However, funding for those programs has been reduced dramatically in recent years. Federal grants, once widely available through a construction grants program, are now only available through Congressional "earmarks" on federal spending bills. Many local, state and national organizations are working with Congress to create a federal trust fund for clean water infrastructure, much as we now have federal trust funds for highways and airports. To learn more or show your support, visit www.cleanwateramerica.org. The city will pursue any alternative funding options that may become available in order to lessen the burden on ratepayers.

Comment: I live on Rahke Road off of Sumner between Meridian and Bluff. My entire street, which is a cul de sac, consisting of about 50 homes is on septic. Heavy rains, it stinks horrible. Is our street included in the septic plan (1.8 million plan?) If not, when are we going to get sewer systems? We do have city water. Thanks. (M. Wertzberger, Indianpolis)

Response: Your neighborhood is located within the boundaries of the Septic Tank Elimination Project BL-32-001 (Brill and Troy). Construction is scheduled for Spring 2009. The approximate boundaries associated with this project are Troy and Sumner to the North, Mt. Vernon to the West, a portion of I-465 to the South and Brill to the East. Currently, this project is in the planning phase. This link will provide you an overview of the Septic Tank Elimination Program: http://www.indygov.org/eGov/City/DPW/Environment/CleanStream/Solutions/Septic/home.htm

Comment: After criticizing the city for thirty years, and raising the pollution of Pogue's Run at every opportunity possible, and after seeing children swimming in Pogue's Run while the water was up, we have a plan for cleaning up sewer overflows. This is a huge job and the planning process has included time for comment and citizen review. I don't agree with everything that has been done. The use of Brookside Park land as an open overflow area for 100 year floods is something I did not want. Yet I applaud the city even for that move, because it was an improvement on the years of inaction that preceded it. Running a city is a huge job, and running it successfully requires long term planning, citizen input, and compromise. We all must be willing to share some pain, and willing to see some compromise. Mayor Bart Peterson has led a bipartisan effort that has resulted in one of the finest moments that I have seen in my 30-odd years as a resident of Indianapolis. The Mayor and the City-County Council get an A from me and from the Brookside Bunch Neighborhood Association. Thank you so much for all you hard work, and thank all the city officials for the hard work, and sometimes angry citizens, that they had to face in the process of bringing all this to fruition. In closing, I want to say that the increased use of the Mayor's liaisons, such as Katy Brett, who works with our area, made it possible for me to make these comments in a timely manner. This is the communication we need to take us forward into a sustainable new millennium. Thank you all so much! We love our city! (F. Watson, Indianapolis)
Response: Thank you for your comment. The staff at the Indianapolis Department of Public Works and its Clean Stream Team have worked many hours to develop this plan and they appreciate your comments. Thanks also should go to the Clean Stream Team Advisory Committee and the many citizens who have participated in public meetings and dialogue on the plan.

Comment: My friend is a home owner in Marion County. They have a well maintained septic system. How will the new raw sewage overflow system affect their water and sewage rates? Will their rates increase? How much will their rates increase? (G. Wade, Indianapolis)
Response: It would help to know your friend's address in Marion County or the neighborhood where they live. Then we can determine if and when their neighborhood is scheduled to receive sewer service. If they are currently on a septic system, they should not be getting a sewage bill. If their neighborhood is slated to get sewer service, they will pay a connection fee to be hooked into the sewer system, and will pay a monthly sewer bill once they receive sewer service. Current sewer rates are about $12.38 per month for 5,400 gallons. Long-term sewer rates are very difficult to predict because of rapidly changing regulatory requirements and higher-than-average inflation in the construction industry. Current projections show residential sanitary sewer rates in 2025 will be around $55-60 for 5,400 gallons per month, based upon 2005 dollars. We expect our rates to remain competitive with other Midwestern cities, who face the same requirements to upgrade their sewer infrastructure.

Comment: I strongly support the upgrades to the Combined Sewer Overflow upgrades. The expense is well worth it to improve our water ways. (J. Barnd, Indianapolis)
Response: Thank you for your comment and your support.

Comment: I am embarrassed to be a native of Indianapolis, where a sewer plan, proposing multi-millions of dollars, does not COMPLETE the job of clean-up. Absolutely NO spills is the objective

that must underline the extravagant expense being proposed. Please revise you plans accordingly. (B. Ferguson, Indianapolis)
Response: The city's goals for the sewer plan are:

- Reducing sewer overflows when people are most likely to be in the streams,
- Improving our streams to support fish and other aquatic wildlife,
- Improving the quality of life in our neighborhoods by reducing odors and capturing the unsightly materials found in overflowing sewers, and
- Coming into compliance with state and federal Clean Water Act permit requirements.

Eliminating overflows through sewer separation is not required under the Clean Water Act and is not necessary to protect human health or meet these goals. In fact, because urban storm water run-off is contaminated with many pollutants, sewer separation is less environmentally beneficial than capturing a high level of combined sewage and stormwater and conveying it for treatment at the advanced wastewater treatment plants. Overflows will only occur during very large storms when people aren't using the streams for recreation. Also, sewer separation is three times more expensive and would push residential sewer bills over $100 a month, based on 2005 dollars. This expense cannot be justified and would not produce better water quality conditions. During public outreach in October 2004, most residents preferred overflow control at the 95-97 percent capture level.

Comment: More money should be spent getting families off septic systems and it should be done faster than any 20 years. If an accelerated plan can be done for the first 3 years, why not continue that amount being replaced instead of slowing down. What are you waiting for, an epidemic to kill some old people or infants? If that happened I'll bet you can't do it fast enough. (L. Givans, Indianapolis)
Response: We agree that septic systems are a priority. Our plan is designed to address the worst neighborhoods and greatest public health threats first. However, septic tank elimination needs to be considered within the context of the city's many clean water infrastructure needs, including raw sewage overflows, sewer backups into streets and basements, treatment plant repairs, aging sewers needing rehabilitation, and fast-growing areas needing more sewer capacity. All pieces of the puzzle need to fit together. We need to ensure that solving a problem in one neighborhood doesn't just transfer it to another area. Our 20-year schedule to eliminate 18,000 septic systems throughout Marion County is both appropriate and protective of public health.

Comment: We wish to thank the Mayor and the Clean Stream Team for the opportunity to obtain and distribute copies of the Executive Summary and CD Roms that inform our residents of significant improvements to take place in our immediate area along West Fall Creek Parkway between N. Meridian and Dr. Martin Luther King, Jr. Streets. We could not participate at the public hearing, but at our neighborhood meeting that same night we reviewed and acknowledged the importance of this long-term project to the health and future vitality of our community and to the City. We will invite and look forward to a Clean Stream Team presentation to us. (M. Warrington, Highland Vicinity Neighborhood Association, Indianapolis)
Response: Thank you for your comment. We look forward to meeting with your members and other interested neighborhood groups as the sewer improvement program proceeds.

Comment: I am signed up for the Stream Overflow Newsletters and I get weekly emails speaking of sewage overflows. I think that an upgrade to the city's sewage system is a definite plus. I would be willing to pay upwards of $10.00 a month extra to have better water facilities and not have local bodies of water smelling like sewage. It is time that people start wanting to pay for top of the line services instead of crying when there is a problem. Go DPW!! (J. Perry, Indianapolis)
Response: Thank you for your support.

Comment: The sewage reduction plan on deck is a nice start. But that's about it; a good effort at best. If $1.8B cuts overflows by 90% what will it take to never have raw sewage flow into our neighborhood streams? Something has to be done and this is a solid step in the right direction. I want to say I applaud the city for getting this far, but I'm too disappointed it took this long to get a plan on paper (Who knows how many overflows we are away from getting a shovel in the ground. At 60 sewage overflows a year I'm assuming quite a few). As an avid outdoor enthusiast not only in Indy but throughout the midwest, it's hard for me to advise my family and friends to avoid indy waterways. It pains me to see perfect river settings throughout the city while knowing we can't enjoy them because of the potential health risks. 60 spills a year works out to around 1 sewage overflow a week within the city. I guess if our city's best effort is a 90% reduction goal (4-6 spills a year), it is what it is. Hopefully the administration shoots higher than curbing 90% of crime, a 90% cleaner downtown or even getting our stoplights to work 90% of the time. (S. Kraege, Indianapolis)
Response: Our plan is the most cost-effective way to meet federal requirements and at the same time protect public health. Eliminating sewer overflows through sewer separation would cost an estimated $6 billion – costing more than three times more and achieving no more days of recreational use on our waterways. At the end of 20 years, sewer overflows will be reduced dramatically from today's 45-80 storms each year down to 0-10 storms. Overflows will occur only during the largest storms, when streams are flowing fast and people are not likely to be exposed to raw sewage. The city's goal was to develop an affordable plan that would focus dollars on projects that will do the most to improve water quality and protect public health. Also, we have already begun putting projects in the ground. The city has already invested more than $200 million to keep raw sewage out of our waterways, especially near parks, schools and neighborhood streams. Already, we've reduced average annual overflows by more than 145 million gallons.

Comment: Why doesn't the city of Indianapolis utilize the sewer gas (methane gas) to generate electricity. This can be done simply and cost-effectively by using the sewer gas to run diesel engines, which turn electrical generators. By doing this and selling the electricity to the utility company's which are required by federal law to purchase this electricity at their cost. The city of Indianapolis could probably generate enough income to offset the cost of providing electrical power to all Government Buildings, School Buildings, Street Lights and city managed property. Thereby freeing up tax dollars to use in improving the infrastructure. Systems like this are already in use at Southside Landfill where they reclaim the methane gas from the bottom of the landfill and use it to fuel engines that turn generators that provide the electrical power for their operations. Additionally, this same technology is used on pig farms where the methane gas generated from pig waste is captured and used for fuel for diesel engines that turn generators to provide all the electrical power for the farming operation. It seams to me that this would be a much wiser use of the methane gas from the sewer system and from the waste treatment plant than simply burning it off to atmosphere. Thank you for your time. (S. Bryson, Indianapolis)
Response: We appreciate your suggestion to evaluate this approach to help ensure that the operational costs of sewage treatment are minimized and that all alternatives for energy sources are pursued. As you mention, the methane from Southside Landfill is captured and used. The City also generates steam from the incineration of solid waste at the Covanta Energy Facility. These two measures have proven to use resources wisely and the City will continue to explore other options in the future to keep our costs down and to wisely use resources. Indianapolis currently incinerates sewage sludge in a cost-effective and environmentally sound manner. This process, unlike some other cities' approaches, does not generate sufficient methane gas to allow for energy recovery. The city completed a pretty thorough investigation into the economics of sludge disposal as part of a recent Solids Handling Study. Harvesting digester gas ranked very low compared to current procedures.

Comment: I totally agree with this plan. I grew up near Pogues Run and its left bank tributary, Brookside Creek, and know that this plan will enhance Pogues Run (and Pleasant Run, another stream I know well). Thank you. (B. Berchekas, formerly of Indianapolis)
Response: Thank you for your support.

Comment: I believe the failure to include the resolution of septic tanks in the long term control plan is a disgrace. EPA estimates that septic tanks are the 5th leading cause of underground pollution of water. In addition, it is a fact that the septic tanks are contributing to the pollution of our rivers, streams, etc. in Marion County. I urge our City/County governmental officials to include the replacement of septic sewage system with sanitation in the Long Term Control Plan. The citizens of Marion County deserve from Mayor Peterson and our elected officials to keep their promise of Indianapolis as a world-class city. (C. Burris, Indianapolis)
Response: We agree that septic systems are a priority. Our Septic Tank Elimination Program is designed to address the worst neighborhoods and greatest public health threats first. However, septic tank elimination needs to be considered within the context of the city's many clean water infrastructure needs, including raw sewage overflows, sewer backups into streets and basements, treatment plant repairs, aging sewers needing rehabilitation, and fast-growing areas needing more sewer capacity. All pieces of the puzzle need to fit together. We need to ensure that solving a problem in one neighborhood doesn't transfer it to another area. Our 20-year schedule to eliminate 18,000 septic systems throughout Marion County is both appropriate and protective of public health. Furthermore, the city believes there is no legal justification for including the Septic Tank Elimination Program in a federal consent decree.

Comment: In October 1999, the Hoosier Chapter of the Sierra Club joined in a civil rights suit filed with the U.S. Environmental Protection Agency's Office of Civil Rights citing the City's decisions regarding the operation of the City's combined sewer overflows that resulted in a disproportionate impact on minorities along Fall Creek and the White River. In October 2001, EPA accepted the complaint for investigation for potential violations of the Federal Civil Rights Act. In November 2001, we jointly asked EPA to suspend its investigation of the complaint pending ongoing discussions as part of the City's development of a Combined Sewer Overflow Long Term Control Plan (CSO LTCP) consistent with the Clean Water Act. EPA agreed to suspend the investigation and served as a valuable facilitator of some discussions. EPA and the City of Indianapolis recently reached a tentative agreement on a CSO LTCP and will make the 20-year plan enforceable through a consent decree. The plan is contingent on the outcome of a public comment period.

The Hoosier Chapter of the Sierra Club supports the CSO LTCP as written. It is a fair outcome that should eliminate the disproportionate impact on minorities caused by the operation of Indianapolis' combined sewer system and redress the ongoing discharge of sewage into our streams. It is not perfect but, if implemented in its present form, should adequately address the CSO issues.

However, we have serious concerns about the City's ongoing commitment to implement key other portions of the plan. Our concerns center on three areas of the plan that are not presently proposed to be part of the consent decree. The City's refusal to include them in the consent decree makes us question whether the plan will be fully implemented. Without key elements in a consent decree, the next administration may renege on the commitments – choosing only to implement the elements incorporated into the consent decree.

Our major concern is that elements of the plan related to septic tanks are not a part of the consent decree despite the ongoing and the significant impact existing failing septic systems have on human health and pollution in our urban neighborhood streams. As Dr. Caine, Marion County Health and Hospital Director stated at your announcement of the revised Barrett process, "Failing septic systems (in Marion County) are a public health issue." Many of these streams, such as Devon Creek, have bacteria concentrations over ten times that of the CSO impacted waters. The consent decree, or some other mechanism, must include enforceable requirements to assure that future administrations implement septic conversions in a shortened time frame

because of their significant human health and water quality impact. A more reasonable and justified time frame would be completion within 6 to 7 years. We have promoted and worked with neighborhood organizations and the city for several years to promote this critical need.

While this may seem like a hypothetical concern, the city's decision to raid the account funded by sewer fees to pay for crime prevention shows how easily the plan can be undermined. This raid is clearly not a one-time event. It has happened in the past to pay for police and fire pensions. The consent decree must contain provisions ensuring the sewer fees are using solely to remedy the sewer problems. Crime prevention is essential but it is not new, and the need is not going away any time soon. The city must raise funds to address that problem too – but not by robbing the fund dedicated to sewers.

Finally, the city has refused to even put in the plan its commitment to the civil rights complainants to notify the public of sewer connection permit applications that may impact downstream sewer capacity. This public notification must be in the plan and in the consent decree. If the consent decree and plan do not address these concerns, we will be raising our concerns again in an objection to the consent decree for public comment. Please contact me at sierra@netdirect.net for any questions or clarifications. Thank you. (S. Zaborowski, Hoosier Chapter Sierra Club, Indianapolis)

Response: Thank you for your comments and your support of the plan as written.

We agree that septic systems are a priority, which is why we included the septic tank commitment in the long-term control plan. Our Septic Tank Elimination Program is designed to address the worst neighborhoods and greatest public health threats first. However, septic tank elimination needs to be considered within the context of the city's many clean water infrastructure needs, including raw sewage overflows, sewer backups into streets and basements, treatment plant repairs, aging sewers needing rehabilitation, and fast-growing areas needing more sewer capacity. All pieces of the puzzle need to fit together. We need to ensure that solving a problem in one neighborhood doesn't transfer it to another area. Our 20-year schedule to eliminate 18,000 septic systems throughout Marion County is both appropriate and protective of public health. Furthermore, the city believes there is no legal justification for including the Septic Tank Elimination Program in a federal consent decree.

Sanitary funds were recently approved to be loaned to Marion County to temporarily cover the cost of leasing 200 additional jail beds to address jail overcrowding and critical public safety needs. This loan, as approved in City-County Special Ordinance No. 5, 2006, must be repaid no later than June 30, 2007. This short-term loan will not affect our ability to deliver sewer improvement projects within the required schedule.

The Department of Public Works has made a commitment to provide information to interested persons on sewer connection applications that may affect downstream sewer capacity. However, it is not necessary to address this or any other city permit matter or ordinance in order to reach agreement with U.S. EPA on a consent decree relative to CSO discharges.

Comment: Congratulations on your diligent efforts to improve the environmental quality of Indianapolis's waterways. The recently approved Long Term Control Plan will benefit the current citizen's as well as future generations. Like many massive public works projects it takes an extended period of time, with input from many interested parties, and a continued focus on the end goal to bring a plan together. You have accomplished this and much more. As public officials you are forced to quantify the economic, technical, and environmental impact of what each project is supposed to do. Through it all, it should not be lost, that creating a better environment for future generations is just the right thing to do.

As an environmental construction professional I know that this planned investment will maintain jobs for existing workers, as well as create new opportunities to enter the industry. Many other areas are drawing construction professionals away from environmental areas, and this sustained, long-term demand for workers will provide a means to keep them employed.

The projected positive impact from this project has been diligently studied. I believe that, as with many other large-scale projects, there will unanticipated positive outcomes. I look forward to finding out what they are.

Thank you for your dedication to this effort to developing a solution to a problem that has been in development for over a hundred years. (David Wrightsman, P.E., Bowen Engineering, Fishers, Ind.)
Response: Thank you for your comments and support.

Comment: Dear Mayor Peterson,

In October 1999, before you were elected, I filed an administrative complaint with U.S. Environmental Protection Agency's Office of Civil Rights on behalf of several organizations citing decisions regarding the operation of the city's combined sewer overflows that resulted in a disproportionate impact on minorities along Fall Creek and White River. In October 2001, EPA accepted the complaint for investigation for potential violations of the Federal Civil Rights Act.

The organizations are Improving Kids' Environment, Hoosier Environmental Council, Hoosier Chapter of Sierra Club, Concerned Clergy of Greater Indianapolis, and the Mapleton Fall Creek Neighborhood Association.

In November 2001, we jointly asked EPA to suspend its investigation of the complaint pending ongoing discussions as part of the City's development of a Combined Sewer Overflow Long Term Control Plan (CSO LTCP) consistent with the Clean Water Act. EPA agreed to suspend the investigation and served as a valuable facilitator of some discussions.

EPA and the City of Indianapolis recently reached a tentative agreement on a CSO LTCP and plan to make the 20-year plan enforceable through a Consent Decree. The plan is contingent on the outcome of a public comment period. EPA will propose the consent decree for comment at a later time.

I rise in support of the CSO LTCP as written. It is a fair outcome that should eliminate the disproportionate impact on minorities caused by the operation of Indianapolis' combined sewer system.

My clients will be submitting comments separately. But I wanted to share my perspective based on their concerns and my experiences. I believe that the CSO LTCP is sufficient to resolve the civil rights concerns we raised. I also believe that the plan – while not eliminating combined sewer overflows – reflects a good plan that balances many competing interests. Assuming the plan is finalized consistent with the draft, I will notify EPA that the complainants will withdraw our civil rights complaint. If it is not, we need to discuss possible changes.

My major concern with the plan is that the whole plan will not be part of the consent decree. Apparently, the elements of the plan related to septic tanks are not a part of the consent decree despite the ongoing and tangible impact these septic tanks have on the pollution in our urban streams. The consent decree should contain the septic tank provisions.

The plan and the consent decree should also contain a requirement that the City implement the promised program to notify the public of sewer connection permit applications that may impact downstream sewer capacity. Tim Method's promise to the complainants and me is helpful but it should be a part of the Plan.

Finally, we just learned that the City is diverting funds raised from sewer fees and dedicated to sewers to address the crime problem. This problem has been ongoing. We recognize that the crime problem has reached a crises stage. We believe that both issues – sewers and crime – are important. Both certainly need to be resolved. But one should not be used to undermine the effectiveness of the other. Nor should the money for sewer improvements be considered a fund that may be dipped into for other city needs, albeit extremely critical ones. The consent decree MUST contain a requirement that sewer fees be used exclusively to implement the CSO LTCP. This practice must stop.

If the consent decree does not address these concerns, we will be raising our concerns again when EPA offers the consent decree for public comment if they are not resolved. Please contact me at 317-442-3973 or neltner@ikecoalition.org for more information. (T. Neltner, Silver Spring, MD)
Response: Thank you for your support of the plan as written.

We agree that septic systems are a priority, which is why we included the septic tank commitment in the long-term control plan. Our Septic Tank Elimination Program is designed to address the worst neighborhoods and greatest public health threats first. However, septic tank

elimination needs to be considered within the context of the city's many clean water infrastructure needs, including raw sewage overflows, sewer backups into streets and basements, treatment plant repairs, aging sewers needing rehabilitation, and fast-growing areas needing more sewer capacity. All pieces of the puzzle need to fit together. We need to ensure that solving a problem in one neighborhood doesn't transfer it to another area. Our 20-year schedule to eliminate 18,000 septic systems throughout Marion County is both appropriate and protective of public health. Furthermore, the city believes there is no legal justification for including the Septic Tank Elimination Program in a federal consent decree.

Sanitary funds were recently approved to be loaned to Marion County to temporarily cover the cost of leasing 200 additional jail beds to address jail overcrowding and critical public safety needs. This loan, as approved in City-County Special Ordinance No. 5, 2006, must be repaid no later than June 30, 2007. This short-term loan will not affect our ability to deliver sewer improvement projects within the required schedule.

The Department of Public Works has made a commitment to provide information to interested persons on sewer connection applications that may affect downstream sewer capacity. However, it is not necessary to address this or any other city permit matter or ordinance in order to reach agreement with U.S. EPA on a consent decree relative to CSO discharges.

Comment: At long last, our "CSO – Long Term Control Plan" is here and out for public comment. For the record I personally would like to see even more done by our city to achieve a zero overflow capability; with that said, I realize this may not be a realistic goal.

The current CSO – Long Term Control Plan – DRAFT addresses the needs of the citizens of Indianapolis, the environment, and those who live downstream of Indianapolis. To reach the clean water levels specified by the State of Indiana and the U.S. Environmental Protection Agency ***is NOT going to be cheap or easy***. The cost of the improvements needed to achieve the state and federal guidelines will require the residents of Marion County to pay higher taxes in form of a monthly sewer user fee or "Sewer Bill." Over the next 20 years this monthly fee will triple or quadruple many residents' monthly cost, which I and most other residents are reluctantly willing to pay. The current administration, Clean Stream Team, and DPW staffs are all to be commended for doing a hard dirty job; which has been denied, hidden, ignored, and kept off the agenda for more than 30 years.

Outside the CSO Long Term Control Plan itself, I have some concerns. The sudden spike in the city's murder rate has driven the City of Indianapolis to take drastic action, which I do understand. However, I do not think that so many have labored for so long, and so hard in this effort just to see it turned into a slush fund for other monetary shortfalls. The operation and management of a large metropolitan city is an immense undertaking, which requires the administration to take quick drastic action in order to manage any situation which may arise at any minute: *i.e.* the transfer of sewer funds to cover short term law enforcement needs. However, vigilance must be maintained in these situations, for we are stepping out on to a slippery slope that can lead to a very hard and disappointing landing. If the city fails to live up to the spirit of the consent decree, the resulting damage and ill feelings will leave deep festering wounds that will eventually heal, over a long period of time, and leave scars that will last even longer.

Indianapolis has wasted far too much time avoiding this issue; it is time to move forward. I support the Indianapolis "CSO – Long Term Control Plan." (L. Bates, Indianapolis)
Response: Thank you for your comments and your support of the plan as written. As you noted, sanitary funds were recently approved to be loaned to Marion County to temporarily cover the cost of leasing 200 additional jail beds to address jail overcrowding and critical public safety needs. This loan, as approved in City-County Special Ordinance No. 5, 2006, must be repaid no later than June 30, 2007. This short-term loan will not affect our ability to deliver sewer improvement projects within the required schedule.

Comment: On behalf of Improving Kids' Environment, Inc., I would like to add my support to the City of Indianapolis' Long Term Control Plan and provide the following comments. Improving

Kids' Environment (IKE) is a not-for-profit advocacy organization that works to reduce environmental threats to children's health.

Since its founding in 1999, IKE has been concerned with combined sewer overflows and the health threats that raw sewage pose to children in Indianapolis, especially those living in Center Township where overflows have historically happened more frequently. IKE has worked closely with City personnel, IDEM and USEPA over the years that the long term control plan has been under development. And, IKE's founder and previous Executive Director filed an administrative complaint with the USEPA regarding the impacts that the municipal sewer system was having on minority neighborhoods.

IKE is very pleased to see this final plan and supports its final adoption. The measures contained in it, when implemented, will dramatically reduce the number of overflow events in our community and reduce the public health risk that these events pose. IKE notes the City's stated commitment to addressing failing septic systems over a 20 year period (§ 7.3.9) and shares the concerns expressed by others that this commitment be fully implemented. IKE also agrees that an important part of the plan must be a system for notifying the public, especially those downstream, of proposed additional sewer connections. IKE is concerned that these elements are not at present included in the draft Consent Decree. The public needs assurance that these programs will be implemented as described.

IKE also shares the concerns expressed by several other commenters that funds now planned for this important program not be diverted to pay for other current or future city needs, worthy as they may be.

Finally, IKE urges the City to continue its efforts to make information about progress of implementation of the long term control plan available to the citizens on an ongoing basis. Especially as sewer bills increase, making sure that the public knows that their money is being put to good and proper use is critical.

Thank you for the opportunity to comment on this plan. IKE looks forward to its implementation and improved water quality in Indianapolis. (J. McCabe, Improving Kids' Environment, Indianapolis)

Response: Thank you for your support of the plan as written.

We agree that septic systems are a priority, which is why we included the septic tank commitment in the long-term control plan. Our Septic Tank Elimination Program is designed to address the worst neighborhoods and greatest public health threats first. However, septic tank elimination needs to be considered within the context of the city's many clean water infrastructure needs, including raw sewage overflows, sewer backups into streets and basements, treatment plant repairs, aging sewers needing rehabilitation, and fast-growing areas needing more sewer capacity. All pieces of the puzzle need to fit together. We need to ensure that solving a problem in one neighborhood doesn't transfer it to another area. Our 20-year schedule to eliminate 18,000 septic systems throughout Marion County is both appropriate and protective of public health. Furthermore, the city believes there is no legal justification for including the Septic Tank Elimination Program in a federal consent decree.

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The Department of Public Works has made a commitment to provide information to interested persons on sewer connection applications that may affect downstream sewer capacity. However, it is not necessary to address this or any other city permit matter or ordinance in order to reach agreement with U.S. EPA on a consent decree relative to CSO discharges.

Finally, we do plan to continue to keep the public informed about progress in implementing the long-term control plan. We agree it will be important to demonstrate that funds are being spent wisely and water quality is improving.

Comment: I agree that the overall scope of the projects proposed is important for the City of Indianapolis to do.

I offer the following observations to assure that the intent is stated precisely and the explanations given in a compelling manner.

1. **The specific criteria to determine compliance with the performance commitment are inadequately written.** The critical criteria appear to be stated in footnotes 1 and 6 of Table 7-5 as achievement of both 1) 97% capture Fall Creek and 95% capture for other receiving waters and 2) 2 CSO events for Fall Creek Watershed and 4 CSO events in other waters in a "typical year." That is clear if "typical year" is clearly established. The footnote says it is the period of "1996 to 2000", which is a clearly defined quantity and distribution of precipitation. However it then adds the phrase "(or another subsequently approved five-year simulation period)." That phrase changes the end-point from one that is clearly defined to one that is an undefined moving target depending who "subsequently approves" an alternative precipitation characteristic for whatever reason.

   This could allow future parties responsible for agreement on either side to develop a misunderstanding of the end-point intended resulting in avoidable legal fighting at best and a solution significantly different than what is being agreed to at worst.

   The sentence ends with a second phrase that confuses matters further stating that the simulation of period 1996 to 2000 is to be done "in accordance with Section 8.4." Section 8.4 simply states that CSO post-construction monitoring will be done. That is excellent for future planning and to determine whether construction was appropriate but it has nothing to do with the simulation monitoring for the "typical year" that should be used to determine City compliance with commitments under this Long Term Control Plan.

2. **What is the written technical rationale for how the tunnels, related piping and other structures will not significantly harm ground water supply of City of Indianapolis?** In meetings there have been oral statements about either the unlikelihood of contamination or of steps that will be taken to prevent it. However, given that 50 and 100 years from now it is likely that the ground water aquifers under the City will be of greater value than at present, I would recommend the report record the current understanding of likelihood of significant contamination and anticipated commitment to detect or to prevent.

3. **Expand discussion of options for flow augmentation.**
   Removing CSO overflows to Fall Creek removes pollution as well as flow to Fall Creek. The report mentions in passing the possibility of flow augmentation as an option outside the LTCP obligations in chapter 7. The advisory group discussed other specific options and the importance of have a clear plan to address the question of adequate base flow in Fall Creek. This should be mentioned.

4. **Rephrase title and final sentence of 7.4.3**
   The LTCP is expected to "eliminate violations of 4.0 ml/L dissolved oxygen standard." That certainly is the expectation or, more appropriately given the physical realities of the waterways, the goal.

   That is different than achieving "aquatic life use attainment." "Full" aquatic life use may be impaired in other ways at various points in the waterways being addressed for physical, biological or chemical reasons, including the reason on paper of exceeding specific aquatic criteria for other parameters.

   A more accurate title would be "(E)limination of Low Dissolved Oxygen Impairment of Aquatic Life Use." A more accurate final sentence would be "(T)his is expected to create waterways with enough dissolved oxygen enough of the time to support a vigorous aquatic community." (I eliminated "restore" in my suggestion because that presupposes a pre-existing condition in some particular decade in the past with its particular land use drainage patterns that may or may not have been an aerobic setting. My reading of early

settings in downtown Indy, for instance, has that as swamplands and original waterways draining the forested lands here were slow meandering streams.)

5. **Adjust use attainability rationale**
In chapter 9, first sentence, I would not say that complete elimination is "infeasible." The case is that any feasible solution is unaffordable.

In second paragraph, the UAA is not a federal tool to "address the reality" of "limited periods" in which "urban waters are unsuitable for recreational use." The UAA is just the justification that any state must use for changing its mind about the designated use that it earlier had agreed was appropriate to aspire to (by memorializing that decision in the state regulation) and which USEPA had agreed to use the power of the Clean Water Act to assist the state to achieve.

It is good to point out that of the many standards that could need to be changed, the City is only requesting the change for recreational use related to bacteria.

As I have said frequently before, until USEPA promulgates a regulation fleshing out the enigmatic "existing use" concept of the 1970's, given the subsequent development of the strong tools of designated use, of water quality standards, of NPDES permit conditions and, arguably, of antidegradation, the idea of existing use should have to do with substantial government recognition that a water body is being used as a particular desired use. "Existing use", just like designated use and indeed NPDES permit limits themselves thus far is a low-flow, steady-state concept. It does not fit well with wet weather. Common sense says that if a particular water body is a functioning trout stream, a state cannot redesignate it as a use that precludes it continuing as a functioning trout stream. If it is a bathing area that the community regards as an asset as a bathing beach, the state cannot redesignate it for a use that precludes that. It does not mean that the presence of a bather or of a trout automatically locks the state into a particular designation.

The City's argument in section 9-3 should not be for the period of time of the specific storm events (9-3 parag 4) but for the entire length of time the state law grants the limited use designation. The local government should not want people to be engaged in recreation downstream of a CSO after an overflow. The government should, for public health reasons including and beyond the CSO issue, attempt to restrict people from recreating in urban run-off waters with pathogens.

9-3 parag 5 bullets one and four are correct. Anyone using these waters for that purpose has been engaging in a generally-regarded undesirable activity. Just because people do intentionally go over Niagra Falls does not meaning going over Niagra Falls should be considered a desirable use of the water.

Bullet points number two and three seem less compelling to me. If you argue that the criteria is whether people "are not known" to be in the water during a large storm event then you open the argument to counterpoints that 1) what if a group of people do become "known" to be in the water during a large storm event, 2) what about the back waters in a large storm event and 3) what about the waters three days after the storm event? To me the simple fact of whether people are known present is irrelevant for "existing use" for recreational use.

Bullet three is not a stand-alone reason. (As such it would have the characteristic circularity of the person pleading for mercy for killing his parents because he is an orphan.) Rather this should be part of bullet one as an explanation of why no own in his or her right mind should have to this point considered the waters a legitimate existing use.

Section 9.4.1 is generally a well-reasoned section regarding urban run-off. In parag 1 I would say "during and after" wet weather events. The core point is that in today's urban setting, human and animal pathogens go into the drainage waters during storm events and remain after storm water events. Urban waters are "naturally" not places for recreational use unless a particular local government wishes to make a heroic effort to capture, clean, disinfect and return storm waters to the streams.

I did not understand how the second bullet related to the CSO text in the second part of the section. I do not understand the relation between the phrase "existence of combined sewer system" as a reason the waters should be redesignated with the paragraphs that were entirely describing how the absence of CSOs would not solve problem. Both are important points to state and explain but they are not connected this way. (B. Beranek, Indiana Environmental Institute, Inc., Indianapolis)

Response: Thank you for taking time to thoroughly review the plan and for your support of the projects proposed. The following are specific responses to your comments:

1. **The specific criteria to determine compliance with the performance commitment are inadequately written.**

   Response: Footnote 6 to Table 7-5 has been edited as shown below:

   "[6] CSO Control Measures will be designed to achieve Performance Criteria of 97 percent capture for the Fall Creek watershed and 95 percent capture for other CSO receiving waters, and 2 CSO events for the Fall Creek watershed and 4 CSO events for each of the other CSO receiving waters in a "typical year." "Typical year" performance, and achievement of Performance Criteria, shall be assessed in accordance with Section 8.4 (Post-Construction Monitoring) using the average annual statistics generated by the collection system model for the representative five-year simulation period of 1996 to 2000 (or another ~~subsequently approved~~ five-year simulation period subsequently proposed by the city and approved by IDEM and U.S. EPA~~). in accordance with Section 8.4 (Post-Construction Monitoring)~~ "

2. **What is the written technical rationale for how the tunnels, related piping and other structures will not significantly harm ground water supply of City of Indianapolis?**

   Response: The following paragraph has been added to Section 7.3.2 to describe the Groundwater Management Plan:

   "Because groundwater is such an important resource for the City of Indianapolis, the city will take all necessary steps to prevent groundwater contamination during construction and operation of the deep tunnel along Fall Creek and White River. The city's Groundwater Management Plan includes the following components: 1) reviewing available groundwater data to evaluate where groundwater impacts might occur along the preliminary tunnel alignments; 2) developing a calibrated groundwater model to evaluate alternatives for tunnel construction in the bedrock; 3) developing a groundwater risk registry and mitigation controls to be considered during construction and future operation; and 4) reviewing specialized construction techniques to protect groundwater. The plan also includes information on recommended groundwater monitoring both during and after tunnel construction to verify groundwater protection."

3. **Expand discussion of options for flow augmentation.**

Response: We agree with the Clean Stream Team Advisory Committee on the importance of returning more base flow to Fall Creek. After initial study, the city's favored approach is construction of an effluent reuse force main to return flows from the Belmont Advanced Wastewater Treatment Plant to Fall Creek, and possibly other waterways. As noted in the LTCP, this will depend upon successful resolution of state and federal permitting issues. We believe the current discussion in the LTCP should remain as-is until further study and facility planning is completed.

4. **Rephrase title and final sentence of 7.4.3**

Response: The subtitle and final sentence were edited to clarify the city's goal is to eliminate the dissolved oxygen impairment:

> **"7.4.3 Dissolved Oxygen Standard ~~Aquatic Life Use~~ Attainment**
>
> "The selected plan is expected to eliminate violations of the 4.0 mg/L dissolved oxygen standard by achieving 95 percent capture in White River and 97 percent capture on Fall Creek. The city also plans to remove Boulevard Dam in Fall Creek, modify Chevy and Stout dams in White River, and provide aeration, if needed, within White River and Fall Creek to ensure attainment of the dissolved oxygen standard. This is expected to ensure sufficient dissolved oxygen to support a vigorous aquatic community in affected waterways."~~fully restore aquatic life uses in waterways affected by CSOs.~~

5. **Adjust use attainability rationale**

Response: The first two paragraphs of Section 9 have been edited to read:

> "~~While complete elimination of combined sewer overflows would be both unaffordable and infeasible, t~~The selected long-term control plan will achieve an extremely high level of CSO control, resulting ~~. Specifically, the LTCP is expected to result~~ in the capture of 95-97 percent of CSO volumes after full program implementation. This is an extraordinary level of control of urban stormwater throughout the CSO area.
>
> "Nevertheless, a few residual CSOs will occur during storms that exceed the LTCP design and performance criteria. This will result in limited periods when CSOs would combine with other pollutant sources (and issues, such as stream flow/velocity) to make urban waters unsuitable for recreational use. ~~To address this reality, f~~Federal and state laws provide a process for refining designated uses through a Use Attainability Analysis (UAA). The UAA is an analysis to identify attainable use designations for CSO receiving waters."

The existing use text you reference in Section 9.3 summarizes the existing use submittal presented to IDEM in 2004, which IDEM has already approved for a 3-month storm. There is no need to change our rationale at this time, and the city believes all four arguments are valid.

The first sentence in the first paragraph of Section 9.4.1 was edited to read "during and after wet weather events."

In Section 9.4.1, the city is required to demonstrate that:

> "Human-caused conditions or sources of pollution prevent the attainment of the use and cannot be remedied or would cause more environmental damage to correct than to leave in place."

The second bullet in Section 9.4.1 identifies the combined sewer system as a human-caused condition that prevents the attainment of the recreational use. The city's alternatives analysis determined that while the combined sewer system could be "remedied" through sewer separation, this solution would cause more environmental damage than leaving the combined sewer system in place and retrofitting it with the proposed storage and conveyance facilities. Figure 9-1 illustrates this point, showing that full sewer separation would not achieve more days of recreational use, and would in some cases achieve fewer days.

Comment: The long term plans to decrease pollution overflow into Pogues Run are inadequate. There is a long history on the near-eastside of trying to get the city to clean up our creek. While canals have been built, and now money will finally be spent on partial cures, this portion of the city's waterway has still been mostly ignored.

Some near-east neighbors sent in pictures this past year of local children swimming in our creek. Many of those kids cannot even afford the charges at the Brookside pool for summer swimming. While parents warn their kids against the creek, it is sad that they would need to do so. It is sad that the city builds canals while ignoring this natural city creek.

There are pictures of local community activist back in 1978 protesting with signs reading: We're tired of turning the other cheek. Help us clean up our creek!

On the posters they displayed, the level of fecal coliform levels was listed as high as 11,000,000 colonies per 100 milliliters, while the state law was a maximum limit of 2000.
A recent article in the Star newspaper displayed that levels are still dismally high. This plan offers little to actually clean that up in this area.

While like most, I have not had the time to carefully study the large document in our library concerning the plans, to my knowledge, the only thing in the plans for areas east of the Harshman/Tech high school area are for a couple " bladders" which hold the sewage during overflow, and then slowly release it back into the creek. Rather than actually separating the sewers here on the near eastside, the plan is to continue to let them overflow into our creek.

In gathering the stats you have in your proposal on community "approval" for the plan that ignores this area, a large number from our community showed up for a meeting where they were showed samples of water: Clean and clear, gray, or black. They were told that to have crystal clear water in our stream they would face sewer bills of over $100 per month, or they could have light 'gray' water (rather than the current dark gray) for about $60 mo. Being a very poor area, they voted for the 60 percent solution. But that was sheer manipulation. Poorer residents, like everyone else, want clean waterways. And while paying a far greater percentage of their income for clear water, they are getting far dirtier water with this plan.

Then, another PR session for the current plan by the city where they talked about how they would create a 'wetlands' in Brookside park, when they simply dug out an area hoping to catch some of the sewage overflow before it hit downtown areas and avoid fines from the EPA for how high it was testing. It has been said it was not positioned properly, and failed at that task. We jokingly refer to it as our 'gray poo pond'.

What is even more baffling is the fact that it was said that in testing, the worst levels of pollutants were found at Emerson and Pogues Run. That is east of all the combined sewer overflows (the creek runs from east to west). When asked if they had investigated the source of that pollution since it was east of the combined sewer overflows, they responded that funds were too limited to do that!?! We would like that investigated, and the sources forced to clean up our creek!

A belief in environmental ethics and a concern for our city's poorer area's kids is needed in these plans. Honest testing and tracking down the sources of pollution is needed in this plan. Canals and waterways should not just be for the rich. Local kids should have clean natural creeks

to play along, even swim in. We have a long history of 'turning the other cheek'; please, clean up our creek. It is a big asset to the city to have a creek running through downtown neighborhoods. Don't stick 'sewer bladders' in it! Clean it up. (K. Siner, Indianapolis)

Response: Thank you for your comments. However, your description of the city's plans for Pogues Run is not accurate. In addition to the inflatable dams and work at Harshman Middle School/Arsenal Tech High School that you mention, the city has many other projects planned for Upper Pogues Run. Those projects are described in Section 7.3.3 of the plan and include:

- **Sewer separation for CSO 143:** Sewer separation will be implemented within the combined sewer area near to CSO 143, thus eliminating this remote sewer overflow upstream of Forest Manor Park.

- **Upper Pogues Run Improvements:** An underground storage facility will be constructed near Spades Park to store flows from nine outfalls located in Forest Manor, Brookside and Spades parks. The facility will temporarily store combined sewage during a storm, until the existing interceptors have capacity to convey flow to the Belmont AWT plant. A large collection sewer will be constructed to convey captured CSO flow from CSOs 102, 101, 100, 099, 098, 097, 096, 095, and 036 to the underground storage facility.

We are sending you a fact sheet describing these plans and including a map of proposed projects.

Your description of the samples shown at the October 2004 public meeting also is not accurate. The three jars contained dark sewage sludge found in our waterways, gray-looking raw sewage entering our treatment plants, and clear treated water coming out of our treatment plants. The city's plan will maximize the amount of sewage receiving full treatment. The $100 option wasn't for "crystal clear" water, but for sewer separation, which actually would result in more polluted urban stormwater in Pogues Run. The $60 option, which the city chose, will ensure that 95-97 percent of our sewage in wet weather gets full treatment represented by the third jar. Some overflows will still occur, but only during the largest storms when people are not using the streams. On Pogues Run, about 60 storms in a typical year cause overflows of raw sewage today. When the plan is complete, just four storms will cause overflows in a year with typical rainfall.

We are aware of the "poo pond" moniker given to the dry retention pond in Brookside Park, but it was never intended to hold "sewage." It was built to capture floodwater from Pogues Run when it floods during the heaviest rainstorms. The retention pond is the last stage of a two-stage flood control system for Pogues Run. The basin built at Interstate 70/Emerson Avenue is designed to fill up with floodwaters first, followed by the Brookside Park pond only during the largest storms. To date, we have not had a storm large enough to require use of the Brookside Park retention pond. This flood control project is working as it was designed.

We agree that Pogues Run is a community asset and our plan will make dramatic improvements to the creek. The city has moved forward aggressively to improve water quality and flood control in Pogues Run, with many projects already constructed. However, urban waterways will never be pristine natural creeks, at least not with the technology we have today. Parents should still warn their children away from the creek and make sure they wash their hands after contact with any urban stream.

The Department of Public Works and Clean Stream Team would be happy to meet with neighborhood groups in the Pogues Run area to discuss the proposed plan and address any questions or concerns you may have.

Comments from Public Hearing

Comment: My name is Sandhya Markand and I'm with the Greater Indianapolis Chamber of Commerce. We are a nonprofit member-based organization that represents the business community. Dating back to 1991, the Indianapolis Chamber of Commerce has been a strong advocate for updating the city's infrastructure system. Within the last five years, we have maintained our support to fix our sewers and clean our waterways by backing the stormwater utility rates. The business community realizes the importance of a high-quality infrastructure system in order to increase the growth of economic development within our region. We

understand that the higher investments we make in the upcoming years will better our community as well as the expansion of business and industry. Our members would like to ensure that the rate increase dollars are spent on projects designed to improve our sewers and water. The Indianapolis Chamber is pleased to see the city move forward with these projects and will continue to support this effort. (S. Markand, Indianapolis Chamber of Commerce)
Response: Thank you for giving the business community's support for this plan. We agree that our infrastructure will help encourage continued economic growth, as well as improved public health. As you stated, sanitary funds were recently loaned to Marion County to temporarily cover the cost of leasing 200 additional jail beds to address jail overcrowding and critical public safety needs. This loan, as approved in City-County Special Ordinance No. 5, 2006, must be repaid no later than June 30, 2007. This short-term loan will not affect our ability to deliver sewer improvement projects within the required schedule.

Comment: I wanted to take a minute just to tell a little story. I think that this is a really important effort, and I want to congratulate the city for moving forward on it in a very serious way. A couple of years ago I had the opportunity to take some visitors from Milwaukee out to look at some aspects of our sewer system. They were interested in that because Milwaukee was sort of re-evaluating their sewer upgrades. But we went out on a day similar to this one, a very hot day, and we found people along Fall Creek, quite a few people, sitting their with lawn chairs and fishing poles, their feet in the water, you know, really enjoying the stream. And just right while we were there – and they didn't have their cameras – there was a cloudburst and it started raining really hard for a very short time. And then the storm passed and a rainbow came out, and seriously, it was very photogenic, but those people did not move. You know, they stayed there, and I'm thinking that the sewers are probably overflowing and these people may or may not know that, but they're still in the stream.

So, I think that our use of the stream is an important focal point for many members of our community, and I think the process for this plan and its development has been a really solid process. There are some aspects of it that we would like to see tweaked a little bit. We'd like to see more emphasis on water conservation, and that is something that we have brought up over and over, but it seems somehow distinct from this planning process, whereas we see it more as inherently related, because if we can reduce our water use, we can reduce the flow in the sewer pipes, and possibly even minimize our infrastructure expenses. So, we'd like to see more emphasis on water conservation, and we would also like to see more emphasis on infiltration through something like leaching basins or constructed wetlands, biofilters. Of course, the downspout disconnection is an important factor, but what do you do with that downspout water? Well, one thing that a lot of cities have done is construct rain gardens and promote rain gardens. These are very popular in Chicago and Milwaukee.

So, there are ways to use the soil to filter that water and recharge the groundwater and slow down the flow of our stormwater getting to the streams. I saw on the CD-Rom I saw some mention of the leaching basins, and there was kind of a dismissal of them because it said there was potential for groundwater contamination, but I've seen several EPA publications that say these leaching basins are very effective, and I'd like to ask the city to take another look at that. Again, those are kind of just tweaking the technical aspects of the plan. I guess our biggest concern is with the use attainability analysis part of the plan, kind of the last chapter, which to paraphrase, is saying that since the waters have never met the water quality standards for recreation, the recreational use has not existed, and we know a lot of people are out there recreating in the stream so we would hate to see that recreational use designation removed. I think I'll stop there. Thanks. (R. Schnapp, Hoosier Environmental Council)
Response: The city agrees that water conservation measures and improved stormwater management are important elements to improved water quality and water resource management. For this reason, the city requires property owners disturbing more than a half-acre of land in the combined sewer area to install stormwater best management practices as part of their development project. By requiring BMPs within the combined sewer area, the city has exceeded its stormwater permit requirements and demonstrated its resolve to better control stormwater runoff in order to mitigate combined sewer overflows. Our analysis of long-term sewer overflow

solutions did not rely on these efforts, however, because water conservation, rain garden programs and similar approaches require voluntary efforts by property owners with benefits that cannot be guaranteed. This does not preclude the city from encouraging water conservation and better stormwater management as it implements the long-term plan.

The city has worked with IDEM to achieve a decision on the interpretation of "existing use," which is concept written in federal regulations to protect waterways that have "actually attained" a beneficial use. On June 27, 2005, IDEM issued a letter to the city agreeing that there are no existing uses that would preclude a refinement of the designated recreational use during severe wet-weather events and resultant CSOs. The text in the long-term control plan merely summarizes the existing use submittal presented to IDEM and the agency's decision. IDEM's decision enabled the city to move forward with a Use Attainability Analysis to determine what recreational uses can be attained on CSO-impacted waterways. The UAA also will go through a public comment and review process before the designated recreational use can be modified. We look forward to working with IDEM, EPA and interested stakeholders during this process.

Comment: My name is John Trypus. I'm an environmental engineer. I just wanted to comment on the Indianapolis long-term control plan in the context that I moved to Indianapolis about two years ago and spent over 30 years in Washington, DC, and have personal involvement in working on their CSO long-term control plan. In 2004 they implemented a signed a similar consent decree as Indianapolis has started the process, and their overall plan, a $2 billion program, was similar, with a tunnel system, and provided a good benefit for water quality at the best affordable rate. In reviewing the Indianapolis one, I think it's also a good plan that's good for the ratepayers. (J. Trypus)
Response: Thank you for your comments and support.

Comment: My name is Turae Dabney and I'm here representing the Indianapolis Black Chamber of Commerce. Our organization's mission is to educate, advocate and enhance Greater Indianapolis through black businesses. The purpose of my comments today is to look at the economic development side of this project, and very simply, we want to encourage you and the city to comply with the 15 percent MBE participation in the construction of this project. We are happy about – and excited – about the health improvements, but want to encourage, as I said, again, to include – have more inclusion of the 15 percent MBE participation in accordance to the city's ordinance. (T. Dabney, Indianapolis Black Chamber of Commerce)
Response: Thank you for your comments. The City of Indianapolis is committed to meeting the 15 percent MBE participation goal as it implements this important program.

Comment: First of all, I'd like to thank you for moving forward with the project, and also for going over and above what the EPA required. Whenever you go over and above the call of duty, that's a good thing. I think there are some additional – or in addition to the practical benefits of reducing the overflows, there are some spin-off benefits. The waterways that would enjoy the greatest improvements or changes are the ones that are the most underutilized today, which is why the project is so important. Upon substantial completion, the waterways will become areas where people will actually want to congregate, which is different than the way they are now. Because these blighted areas are areas where people don't congregate but where they will, I believe there will be some economic development potential in the waterways. One potential economic development benefit might be trying to attract water sports. I'm not sure if it's practical or feasible, I'm not sure if our waterways are wide enough or deep enough or configured in the correct way, but if they are and if we could attract a nationally recognized – preferably nationally televised – water sporting event, that would be a good feather in our cap as we move forward with this project. In terms of the increase in tax, I am not an advocate of increased taxes, but I am an advocate of structuring tax increases appropriately, and I believe the structure is appropriate. It's a little bit at a time, which is really good. Having said that, what's a little bit to me might be a lot to someone else, but I do believe that the structure is a good structure. So, I ask that you all move

forward with all deliberate speed, and I look forward to improving these assets. (T. Aden, Indianapolis)

Response: Thank you for your comments. We agree that this program will add value to waterways that are underutilized today. We expect there will be many economic benefits as a result of the project. One key to continued economic growth will be structuring rate increases so they are affordable for our residents and competitive with other cities. We will strive to do both.

Summary of Changes to Indianapolis LTCP in Response to Public Comment
September 6, 2006

Executive Summary: Non-substantive changes were made to pages 2 and 19 to remove references to public comment period.

Section 1: Minor change to page 1 to remove reference to public comment version of plan.

Section 2: Corrected redundant references to pesticides on pages 2-5 and 2-103.

Section 3: Reference to chemical formula for ozone deleted from page 3-14.

Section 4: No changes

Section 5: Public Works Board and advisory committee members updated. Added new Section 5.9 to document 2006 public comment period, comments received and city's responses.

Section 6: No changes.

Section 7: Three changes:

Table 7-5/Exhibit 1 – Edits to Footnote 6:

> [6] CSO Control Measures will be designed to achieve Performance Criteria of 97 percent capture for the Fall Creek watershed and 95 percent capture for other CSO receiving waters, and 2 CSO events for the Fall Creek watershed and 4 CSO events for each of the other CSO receiving waters in a "typical year." "Typical year" performance, and achievement of Performance Criteria, shall be assessed in accordance with Section 8.4 (Post-Construction Monitoring) using the average annual statistics generated by the collection system model for the representative five-year simulation period of 1996 to 2000 (or another ~~subsequently approved~~ five-year simulation period subsequently proposed by the city and approved by IDEM and U.S. EPA~~). in accordance with Section 8.4 (Post-Construction Monitoring)~~

7.3.2 Fall Creek Control Measures: A new paragraph was added to explain how the city will prevent and detect groundwater contamination from the tunnel. The paragraph reads:

> Because groundwater is such an important resource for the City of Indianapolis, the city will take all necessary steps to prevent groundwater contamination during construction and operation of the deep tunnel along Fall Creek and White River. The city's Groundwater Management Plan includes the following components: 1) reviewing available groundwater data to evaluate where groundwater impacts might occur along the preliminary tunnel alignments; 2) developing a calibrated groundwater model to evaluate alternatives for tunnel construction in the bedrock; 3) developing a groundwater risk registry and mitigation controls to be considered during construction and future operation; and 4) reviewing specialized construction techniques to protect groundwater. The plan also includes information on recommended groundwater monitoring both during and after tunnel construction to verify groundwater protection.

7.4.3 Aquatic Life Use Attainment: Subtitle and final sentence were edited to clarify the goal is to eliminate the dissolved oxygen impairment.

> **7.4.3 Dissolved Oxygen Standard ~~Aquatic Life Use~~ Attainment**
>
> The selected plan is expected to eliminate violations of the 4.0 mg/L dissolved oxygen standard by achieving 95 percent capture in White River and 97 percent capture on Fall Creek. The city also plans to remove Boulevard Dam in Fall Creek, modify Chevy and Stout dams in White River, and provide aeration, if needed, within White River and Fall Creek to ensure attainment of the dissolved oxygen standard. This is expected to ensure sufficient dissolved oxygen to support a vigorous aquatic community in affected waterways."~~fully restore aquatic life uses in waterways affected by CSOs.~~

Section 8: No changes.

Section 9: First two paragraphs were edited to read:

> ~~While complete elimination of combined sewer overflows would be both unaffordable and infeasible, t~~The selected long-term control plan will achieve an extremely high level of CSO control, resulting ~~. Specifically, the LTCP is expected to result~~ in the capture of 95-97 percent of CSO volumes after full program implementation. This is an extraordinary level of control of urban stormwater throughout the CSO area.
>
> "Nevertheless, a few residual CSOs will occur during storms that exceed the LTCP design and performance criteria. This will result in limited periods when CSOs would combine with other pollutant sources (and issues, such as stream flow/velocity) to make urban waters unsuitable for recreational use. ~~To address this reality, f~~Federal and state laws provide a process for refining designated uses through a Use Attainability Analysis (UAA). The UAA is an analysis to identify attainable use designations for CSO receiving waters."

Section 9.4.1: First sentence in first paragraph was edited to read "during and after wet weather events."

> Not surprisingly in these urban waters, there are human-caused conditions and sources of pollution that prevent full attainment of the recreational use during and after wet weather events.